BEFORE THE HON'BLE NATIONAL GREEN TRIBUNAL

PRINCIPAL BENCH, NEW DELHI

Original Application No. 225/2022

In the matter of**:**

Nitin Dhiman …Applicant

Versus

State of Punjab & Others. …Respondents

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Filed By:-

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NEW DELHI

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Compliance Report of CPCB in matter of Original Application No. 225/2022; Nitin Dhiman Versus State of Punjab & Others ((IA NO 815/2023, IA NO 668/2023, IA NO 596/2023, IA NO 20/2023, IA NO 21/2023) with OA 546 of 2024; News item titled "Ludhiana PPCB report flags 54 dyeing units in Buddha Nullah,s catchment" appearing in the Hindustan Times dated 25.04.2024"

1.0. Background and the Directions of Hon'ble National Green Tribunal:

The matter relates to the alleged discharge of pollutants by dyeing units in Ludhiana and the performance of three Common Effluent Treatment Plants (CETPs) set up for the purpose of treating the effluent discharged by these units. The Hon'ble National Green Tribunal is considering the issue of effluent discharge through the sewer system by the dyeing units into Buddha Nallah in the State of Punjab.

The Hon'ble National Green Tribunal, Principal Bench vide order dated 27.11.2024 in **Original Application No. 225/2022** (IA No. 815/2023, IA No. 668/2023, IA No. 596/2023, IA No. 20/2023, IA No. 21/2023); **Nitin Dhiman Versus State of Punjab & Others** has issued following directions to CPCB (Respondent No. 12):

Para-07 : "*Respondent No.12 (CPCB) is also directed to file the compliance report disclosing performance of CETPs and required actions to be taken by issuing necessary directions under the Water (Prevention and Control) of Pollution, 1974 and the Air (Prevention and Control) of Pollution Act, 1981 or under Section of 5 of Environment (Protection) Act, 1986.*"

Accordingly, inspection cum performance evaluation of 04 Common Effluent Treatment Plants (CETPs) in the area were carried out by team of officials from the Central Pollution Control Board on December 24-25, 2024. Three CETPs of capacity 40 MLD, 50 MLD, and 15 MLD were inspected and monitored on December 24, 2024, whereas one CETP of 500 KLD capacity was inspected and monitored on December 25, 2024. The officials of Punjab Pollution Control Board (PPCB) Regional office, Ludhiana were also present at the time of inspection, as per following details:

Name and Designation of Officials from CPCB	Name and Designation of Officials from PPCB
1. Dr. Narender Sharma, Scientist-'F' & Regional Director CPCB, RD Chandigarh 2. Sh. J. P. Meena, Scientist- 'D' CPCB RD, Chandigarh	1. Sh. Bhism Singh, AEE, PPCB, R.O-III, Ludhiana 2. Sh. Rajpal Gill, AEE, PPCB, R.O-III, Ludhiana

3. Sh. Gokul Kanan, Scientist- 'B' IPC-VI 'CPCB H.O. Delhi 4. Sh. Shubham Singh, SA, CPCB RD, Chandigarh 5. Sh. Pankaj Saini, SA, CPCB RD, Chandigarh	3. Sh. Bachanpal, AEE, PPCB -RO-IV, Ludhiana

1.1. Details of CETPs:

There are four CETPs located in Ludhina, three CETPs are for Textile dying and printing industries in the area and one CETP for Electroplating units. The basic details of the CETPs located in Ludhiana, including location, catchment area, treatment process/technology, designed capacity, operating agency, location of final discharge etc. were collected and compiled, as summarized in the **Table 1**.

Table 1: **Details of CETPs located in Ludhiana.**

Particulars/ S. No	**1**	**2**	**3**	**4**
Location of CETP	CETP 40 MLD (Focal point Module) Tajpur Road Near Central Jail, Ludhiana (Punjab)	CETP 50 MLD Tajpur Road, Near Central Jail, Ludhiana Punjab.	CETP, 15 MLD, Bahadur Ke Road, District Ludhiana (Punjab).	CETP 500 KLD focal point, Electroplating Plot No. D-260-261, Phase-VIII, Focal Point, Ludhiana
Industrial area	Dyeing Industrial area Focal Point (Phase 1 to Phase 8)	Dyeing Industries Tajpur Road area Ludhiana	Textile & Knitwear Dyeing Units Industrial Zone Bahadur Ke Road, Ludhiana	Electroplating Industries and Allied Industries (Metal Surface Treatment) of Ludhiana, Jalandhar, Amritsar, Malerkotla.
Number of member industries	65	105	36	1624
Date of Establishment	January 2022	March, 2022	July, 2020	2007
Treatment System of CETP	Physico-chemical followed by biological (SBR) process SBR	Physico-chemical followed by biological (SBR) process SBR	Physico-chemical followed by biological (SBR) process SBR	Physico-chemical treatment followed by Filtration, two-stage RO and evaporator
Designed capacity	40 MLD	50 MLD	15 MLD	500 KLD
Status of operation during visit	Operational	Operational	Operational	Operational
Special Purpose Vehicle (SPV)	M/s Punjab Dryers Association (PDA) Focal Point Module	M/s Punjab Dryers Association (PDA) Tajpur-	M/s Bahadur-Ke-Textile & Knitwear Association (SPV)	M/s Ludhiana Effluent Treatment Society (LETS)

		Rahon Road Cluster		
Operating Agency	M/s Larson & Tubro Construction Pvt. Ltd.	M/s Triveni Engineering & Industries Ltd.	M/s Sourabh Construction Pvt. Ltd.	M/s J.B.R technologies Pvt. Ltd.
Final discharge	Budha Nallah	Budha Nallah	Budha Nallah	Treated water is used for plantation, gardening, watering to MC parks, DC office, NH-95 etc.

i. The Buddha Nallah is 47-km natural water stream originating from Koom Kalan and 14 km of the stretch flows through Ludhiana City. The Buddha Nallah eventually merging into the Sutlej River at Walipur Kalan, traveling another 18 km from Ludhina.

ii. These CETPs are being operated by different operating agencies under the supervision of 04 different Special Purpose Vehicles (SPVs).

iii. The 40 MLD CETP is operated by M/s Larsen & Toubro Construction Private Limited under the supervision of the Special Purpose Vehicle (SPV), M/s Punjab Dyers Association (PDA) focal point module Ludhiana Punjab. This CETP treats effluent generated from textile dyeing units located in the Focal Point industrial area, Ludhiana.

iv. The 50 MLD CETP is operated by M/s Triveni Engineering & Industries Limited under the supervision of SPV namely Punjab Dyers Association (PDA) for the Tajpur-Rahon Road Cluster in Ludhiana. This CETP treats effluent generated from textile dyeing units located in the Tajpur-Rahon Road area, Ludhiana.

v. The 15 MLD CETP is operated by M/s Sourabh Construction Private Limited under the supervision of the SPV namely M/s Bahadur-Ke-Textile & Knitwear Association. This CETP treats dyeing effluent generated from textile and knitwear dyeing units located in the Bahadurke Road industrial area, Ludhiana.

vi. 500 KLD CETP is operated by M/s J.B.R Technologies Private Limited, Ludhiana under the supervision of SPV M/s Ludhiana Effluent Treatment Society (LETS). This CETP caters to electroplating and allied industries (metal surface treatment) located in districts of Ludhiana, Jalandhar, Amritsar, and Malerkotla. The CETP with a designed capacity of 500 KLD

1.2. Methodology adopted for Performance Evaluation:

In compliance with the directions of Hon'ble NGT, inspection cum performance evaluation of all 04 CETPs were carried out. The methodology adopted for performance evaluation by collecting samples from various stages of CETPs including final discharge, collecting relevant information, percentage reduction in the monitored parameters have been calculated and reported. The collected samples were analyzed at CPCB central wastewater Laboratory, Delhi.

2.0 Performance Evaluation of CETPs:

The performance of individual CETPs based on the inspection and monitoring carried out by CPCB team is as follows:

2.1 40 MLD CETP, Tajpur Road:

1. The CETP is designed to treat 40 MLD effluent generated from textile dyeing & printing units located at focal point (Phase 1 to 8). ***The CETP is operating at average flow rate of 30 MLD, thus utilizing 75% of its capacity***. It was observed that the CETP operator has installed Electromagnetic Flow Meters at the inlet receiving chamber, the outlet of the equalization tank, and the final outlet of the CETP.

2. The effluent is received at CETP through a dedicated conveyance system (Pipeline), which is maintained by the Punjab Dyers Association (SPV for 40 MLD capacity). The PPCB has not prescribed inlet standards for CETP.

3. The 40 MLD CETP is operated based on Physico-chemical followed by Biological Process (Sequential Batch Reactor). The CETP is comprised of the components namely Receiving Chamber (20.83 m^3) → Coarse Screen (Mechanical + Manual) → Raw effluent Collection Sump (416.670 m^3)→ Stilling Chamber (20.830 m^3)→ Fine Screen (Mechanical + Manual) → Grit Chamber (2 No., 81.0 m^3 each) → Oil & Grease Skimmer →Equalization Tank (20040 m^3) → pH Correction Tank -1 (555.560 m3, Lime& $FeSO_4$ dosing, RT-20 minutes) →Sludge Blanket Clarifier (3721.374 m^3, Poly Dosing, RT-2.23 hr) →pH Correction Tank–II (138.890 m^3, RT-5 min) > SBR Basins (04, RT-4 hr) → Chlorine Contact Tank (833.33 m^3, RT-30 min)→ Treated Effluent Disposal. Sludge dewatering system comprising of centrifuge followed by Dryer is provided. The CETP has installed four Sequential Batch Reactor (SBR basins) which operated in a cyclic batch mode controlled by a PLC, with the following time schedule: Filling and Aeration for 120 minutes, Settling for 60 minutes, and Decanting for 60 minutes.

4. The ***consent to operate granted to 40 MLD CETP under the Water Act, 1974 has been expired on 15.05.2023***, whereas the Consent to Operate under the Air Act, 1981 is valid upto 29.12.2024 and the Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 was valid upto 19.12.2024 for the operation of 40MLD CETP. The CETP operator has applied for renewal of consents under Air Act and Water Act to PPCB on 02.01.2025 and 25/10/2024 respectively. No information was made available to CPCB team with regard to application for renewal of authorization.

5. The bio-sludge generated from the SBR basin is collected in the bio-sludge sump followed by centrifugation for dewatering. Similarly, Chemical sludge from the Sludge Blanket Clarifier is collected in the Chemical sludge sump followed by centrifugation for dewatering. The filter cake obtained from centrifugation step is sent to the Paddle dryer to further reduce the water content and the solids recovered from Paddle dryer is sent to the TSDF. The filtrate from the decanters is sent to pH Correction Tank-1 followed by further treatment in CETP.

6. The CETP has provided sludge storage facility and obtained membership from Treatment, Storage, and Disposal Facility (TSDF), M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited), Nimbua, Derabassi, Punjab. The CETP had disposed 3517.235 MT sludge during the year 2023- 24, as per the log book records, against the authorized capacity of 11000 MT/annum.

7. The CETP has installed one DG set of 1600 KVA capacity as a backup of power supply, which is equipped with acoustic enclosure and stack.

8. The CETP operator has installed a 1.5 TPH capacity boiler to produce steam, which is utilized in the paddle dryer for drying CETP sludge. Emissions from both the boiler and dryer are released into the atmosphere through a common stack, after passing through a wet scrubber as Air Pollution Control Device (APCD).

9. The grab samples collected by CPCB team from 40 MLD CETP from the following points (**Table 2**) were analyzed in CPCB Head Office laboratory:

Table 2: **40 MLD CETP Sampling Locations.**

S. No.	Sampling Location
1.	Inlet of CETP
2.	Outlet of Equalization Tank
3.	Inlet of SBR

4.	Outlet of SBR
5.	Final treated effluent
6.	SBR Tank (For MLSS and MLVSS)

10. The analysis results of samples collected by CPCB presented in **Table 3**. The PPCB has not prescribed inlet norms for CETP.

Table 3: Analysis results of the samples collected from 40 MLD CETP.

Parameters (All values are in mg/l except pH)	Inlet of CETP	Outlet of Equalization Tank	Inlet of SBR	Outlet of SBR	Final Treated effluent	MoEF&CC notified Std. vide notification . 4 (E), dated 1/1/2016 for discharge into inland surface water
pH	7.4	7.0	6.5	7.1	8.3	6-9
Oil and Grease	BDL	--	--	--	BDL	10
COD	860	1000	468	187	49	250
BOD	319	432	265	62	27	30
TSS	226	385	63	48	29	100
TDS	4532	4340	4040	3972	4204	2100
FDS	4188	4012	3756	3772	**3760**	2100
Cl^-	2423	2325	2280	2375	**1805**	1000
TKN	7	--	--	--	12	50
NH_3-N	4	--	--	--	05	50
PO_4-P	1.36	0.80	0.14	0.88	0.31	5
NO_3-N	3.70	12.7	6.47	2.53	3.80	10
SO_4	375	425	486	506	463	1000
Fluoride	**0.7**	1.1	1.1	2.20	0.9	2.0
Sulphide	3.2	--	--	--	**3.6**	2.0
Phenolic compounds as C_6H_5OH	1.9	--	--	--	0.92	1.0

11. As per analysis results of the samples collected by CPCB team, 40 MLD CETP was found to be non-complying with regard to Fixed Dissolved Solids (3760 mg/l > prescribed limit of 2100 mg/l), Sulphide 3.6 mg/l > prescribed limit of 2 mg/l) and Chloride (1805 mg/l > prescribed limit of 1000 mg/l) parameters.

12. The samples collected by CPCB team from inlet and outlet of CETP were also analyzed for the presence of heavy metals and the analysis results are presented in **Table 4**.

Table 4: Analysis results of heavy metal parameters.

Sampling Locations	Sample Codes	T-Cr	Cr^{+6}	Cd	Cu	Mn	Pb	Zn	Ni	As	Fe	Se	V
Inlet of CETP	CT-B1	0.02	BDL	BDL	0.046	0.071	BDL	0.065	0.013	BDL	0.545	BDL	0.078

Final outlet	CT-B5	BDL	BDL	BDL	BDL	0.132	BDL	0.028	0.006	BDL	1.431	BDL	0.011
Prescribed limits (All values are in mg/l) prescribed by MoEF&CC vide notification . 4 (E), dated 1/1/2016 for discharge into inland surface water.		02	0.1	0.05	03	02	0.1	05	03	0.2	03	0.05	0.2

13. The concentration of heavy metal parameters in the samples collected by CPCB from 40 MLD CETP were found within the prescribed limits.

1. *The overall performance of CETP with regard to removal efficiency of COD, BOD and Suspended Solids parameters based on analyzed concentration of respective parameters at inlet and outlet was found to be 95.10%, 93.75 % and 92.47% respectively,* ***which was found to be adequate to achieve the prescribed norms. However, the overall removal efficiency of FDS, Chloride and Sulphide parameters based on analyzed concentration of respective parameters was found to be 6.28 %, 22.36% and 0% respectively, requires improvement to achieve to prescribed limits.***

14. The biomass concentrations in the SBR basin in terms of MLSS and MLVSS were found as 3515 mg/l and 2510 mg/l respectively. ***The MLVSS/MLSS ratio was found to be 0.70. The MLVSS /MLSS ratio between 0.6-0.8 indicates satisfactory operation of biological treatment system (SBR)***

15. Online Continuous Effluent monitoring system (OCEMS) is installed at inlet and final outlet of CETP for measuring pH, TSS, COD BOD and Flow of raw influent and treated effluent quality. The CETP operator calibrated the Online Continuous Effluent Monitoring System (OCEMS) installed at the inlet and outlet on March 26, 2024 and the next calibration is due on March 25, 2025. The variation was observed in the lab analysis value and the OCEMS value on the day of inspection as presented in **Table 5**:

Table 5: **Comparison of Laboratory Analysis Values with OCEMS Values.**

Sampling location	Analysis results	Date/time	Parameters			
Final outlet of CETP			pH	TSS	COD	BOD
	Lab analysis value	24/12/2024/	8.3	29	49	27
	OCEMS value	22/12/2024/2.58 PM	7.7	39	156.8	20.4
% Variation w.r.t. Laboratory Data			(-) 7.22	(+) 34.48	(+)220	(-)24.44

The OCEMS values for TSS and COD were found to be 34% and 220% higher and BOD was found to be 24% lower in comparison to laboratory analysis value, which indicates improper calibration and validation of OCEMS.

16. It was observed by CPCB team that the ***CETP is discharging treated effluent into Budha Nallah through an underground pipeline as per CTO granted by PPCB and which has expired on 15/05/2023. This treated effluent meets River Sutlej after travelling a distance of about 24-25 km. However, as per the Environmental Clearance (EC) issued by MoEF&CC to the CETP dated 03.05.2013, "the treated wastewater will be used for irrigation," and it is also stated in the special terms and conditions that "there shall be no discharge into Budha Nallah."***

2.1.1 50 MLD CETP, Tajpur Road:

1. The CETP is designed to treat 50 MLD effluent generated from textile dyeing & printing units located at Tajpur-Rahon Road, Ludhiana. The CETP is operating at average flow rate of 40 MLD, thus utilizing 80% of its capacity. It was observed that the CETP has installed flow Ultrasonic type flow meters at Parshall flume Channel (inlet channel) and at the final outlet of CETP (outlet of Chlorine Contact Tank). A record of the same was maintained by the operator.

2. The effluent is received at CETP through a dedicated conveyance system (Pipeline) , which is maintained by the Punjab Dyers Association (SPV for 50 MLD capacity). The PPCB has not prescribed inlet standards for CETP.

3. The 50 MLD CETP is operated based on Physico-chemical treatment followed by Biological Process (Sequential Batch Reactor). The CETP is comprised of following components namely; Main Pumping station (Inlet Chamber →Coarse Screen (Mechanical + Manual)→Sump Well→ Inlet chamber → Fine Screen(Mechanical + Manual) →Aerated Grit Chamber(Mechanical + Manual) → Oil & Grease Removal →Equalization Tank (in 02 Compartment) →Flash Mixer (Lime & $FeSO_4$ dosing, Poly Dosing) →Clari-flocculator (HCL dosing)→ Distribution Chamber for SBR →SBR Basins (12.5 MLD x 4 no's basin) >Chlorine Contact Tank → Treated Effluent Disposal. Sludge dewatering system comprising of Thickener (01)→Belt Filter Press(04no's each of 45 m^3/hr capacity) has been provided by the CETP. The CETP has installed four Sequential Batch Reactor (SBR basins) which operated in a cyclic batch mode controlled by a PLC, with the following time schedule: Filling and Aeration for 120 minutes, Settling for 60 minutes, and Decanting for 60 minutes.

4. **The consent to operate granted to 50 MLD CETP under the Water Act, 1974 was valid upto 22.08.2023**, whereas the Consent to Operate under the Air Act, 1981 is valid upto 31/03/2026. *The Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016* ***was valid upto 04/12/2023***. ***The CETP was found to be operating without valid consent to operate under Water Act, 1974 and Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 at the time of inspection.*** The CETP operator applied for renewal of consents under Water Act and Authorization to PPCB on August 31, 2023.

5. The bio-sludge generated from the SBR basin is passed through a thickener and the thickened sludge is collected in the thickened sludge sump. The thickened sludge is fed into a belt press for dewatering. Similarly, Chemical sludge generated from clari-flocculation of the effluent at the bottom of clari-flocculator is collected in the chemical sludge sump followed by feeding into the belt filter press for dewatering. The combined filtrate is sent to equalization tank for further treatment.

6. It was observed that the CETP has constructed a shed for the storage of CETP sludge. As per log book record maintained by the CETP, 1597.20 metric tons (MT) of sludge was sent to the TSDF operated by M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited), Nimbua, Derabassi, Punjab for final disposal during FY 2023-24. The records also show that 1531.495 MT of sludge was sent to the TSDF from May to December 2024 against authorized capacity of 2500 MT/annum. 173 MT of sludge was recorded as stored in the premises.

7. The grab samples collected by CPCB team from 50 MLD CETP from the following points (**Table 6**) were analyzed in CPCB Head Office laboratory:

Table 6: **50 MLD CETP Sampling Locations.**

S. No.	Description of sampling locations
1.	Inlet of CETP
2.	Outlet of Equalization Tank
3.	Inlet to SBR
4.	Outlet of SBR
5.	Final treated effluent
6.	SBR Tank

8. The analysis results of samples collected by CPCB presented in **Table 7**. The PPCB has not prescribed inlet norms for CETP.

Table 7: Analysis results of the samples collected from 50 MLD CETP.

Parameters (All values are in mg/l except pH)	Inlet of CETP	Outlet of Equalization Tank	Inlet of SBR	Outlet of SBR	Final treated effluent after Chlorination	MoEF&CC notified Std. vide notification . 4 (E), dated 1/1/2016 for discharge into inland surface water.
pH	7.5	7.3	7.7	7.3	8.0	6-9
Oil and Grease	BDL	--	--	--	BDL	10
COD	570	848	448	98	125	250
BOD	194	410	232	24	**54**	30
TSS	192	162	92	32	47	100
TDS	2680	2416	2600	2744	2852	2100
FDS	2279	2056	2384	2596	**2364**	2100
Cl^-	1093	1615	1568	1473	**1283**	1000
TKN	04	--	--	--	BDL	50
NH_3-N	BDL	--	--	--	BDL	50
PO_4-P	0.66	0.69	0.6	0.12	0.43	5
NO_3-N	12.2	8.4	8.4	5.06	4.8	10
SO_4	280	291	224	411	410	1000
Fluoride	BDL	0.6	0.9	0.9	0.8	2.0
Sulphide	3.2	--	--	--	**2.4**	2.0
Phenolic compounds as C_6H_5OH	1.6	--	--	--	**3.62**	1.0

9. ***As per analysis results of the samples collected by CPCB team, 50 MLD CETP was found to be non-complying with regard to BOD (54 mg/l > Prescribed limit of 30 mg/l), FDS (2364 mg/l > prescribed limit of 2100 mg/l), Sulphide (2.4 mg/l > prescribed limit of 2 mg/l), Chloride (1283 mg/l > prescribed limit of 1000 mg/l) and Phenolic Compounds (3.62 mg/l > Prescribed Limit of 1.0 mg/l) parameters.***

10. The samples collected by CPCB team from inlet and outlet of CETP were also analyzed for the presence of heavy metals and the analysis results are presented in **Table 8**.

Table 8: Analysis results of heavy metal parameters.

Sampling Locations	**Sample Codes**	**T-Cr**	**Cr^{+6}**	**Cd**	**Cu**	**Mn**	**Pb**	**Zn**	**Ni**	**As**	**Fe**	**Se**	**V**
Inlet of CETP	CT-A1	0.007	BDL	BDL	0.029	0.112	BDL	0.223	0.006	BDL	0.598	BDL	0.024
Final outlet	CT-A5	0.005	BDL	BDL	BDL	0.039	BDL	0.045	0.007	BDL	1.509	BDL	BDL
Prescribed limits (All values are in mg/l) prescribed by MoEF&CC vide notification . 4 (E), dated 1/1/2016 for		02	0.1	03	0.05	02	0.1	05	03	0.2	03	0.05	0.2

discharge into inland surface water.												

11. The concentration of heavy metal parameters in the samples collected by CPCB from 50 MLD CETP were found within the prescribed limits.

12. ***The overall performance of CETP with regard to removal efficiency of COD, BOD and Suspended Solids parameters was found to be 85 %, 87 % and 71% respectively, which was found adequate to achieve the prescribed norms. However, the overall performance with regard to removal efficiency for BOD, Chloride, Sulphide and Phenolic compounds parameters based on the analyzed concentration of respective parameters was found to be 87%, 20.5%, 25% and 0% respectively, requires improvement to achieve to prescribed limits.***

13. The biomass concentrations in the SBR basin in terms of MLSS and MLVSS were found as 5456 mg/l and 2849 mg/l respectively. The MLVSS/MLSS ratio was found to be 0.52, which is lower than the recommended ratio of 06-0.8. The MLVSS /MLSS ratio between 0.6-0.8 indicates satisfactory operation of biological treatment system (SBR)

14. Online Continuous Effluent monitoring system (OCEMS) is installed at inlet and final outlet of CETP for measuring pH, TSS, COD and BOD. The Online Continuous Effluent Monitoring System (OCEMS) was last calibrated on May 12, 2024. The variation was observed in the lab analysis value and the OCEMS value on the day of inspection as presented in **Table 9**:

Table 9: **Comparison of Laboratory Analysis Values with OCEMS Values.**

Sampling location	Analysis results/grab	Date/time	Parameters			
Final outlet of CETP			pH	TSS	COD	BOD
	Lab data	24/12/24	8.0	47	125	54
	OCEMS data	24/12/24	7.23	14.4	89.4	16.2
% Variation w.r.t. Laboratory Data			(-) 9.6	(-) 69.36	(-) 28.48	(-) 70

A wide variation was observed in the lab analysis values and the OCEMS values on the day of inspection. The OCEMS values for TSS, COD and BOD were found to be 28% to 70% lower in comparison to laboratory analysis value, indicating improper calibration of OCEMS.

15. It was observed that the CETP is discharging treated effluent into Budha Nallah through an underground conveyance channel as per CTO, which ultimately meets River Sutlej. However, as per the Environmental Clearance (EC) issued by MoEF&CC to the CETP, "the treated wastewater will be used for irrigation," and it is also stated in the special terms and conditions that "there shall be no discharge into Budha Nallah."

2.1.2 15 MLD CETP, Bahadur Ke Road, Ludhiana:

1. The CETP is designed to treat 15 MLD effluent generated from textile dyeing & printing units located at Industrial Area Bahadur Ke Road, Ludhiana. The CETP is operating with a flow rate of 10 MLD, thus utilizing 66.66% of its capacity.

2. The CETP receives effluent through a common dedicated underground pipeline. The CETP has installed electromagnetic flow meter at inlet of receiving chamber and final outlet. The records of the flow were found maintained by the CETP Operator and records of the same were maintained. The PPCB has not prescribed inlet standards for CETP.

3. The 15 MLD CETP is operated based on Physico-chemical followed by Biological Process (Sequential Batch Reactor). The CETP is comprised of the components namely Receiving Chamber → Coarse screen → Raw Effluent Pumping Station → Inlet chamber → Fine Screen (6mm) → Grit Chamber → Oil & Grease Removal system → Equalization Tank (Coarse Diffuser, 5002 m^3)→ Dissolved Air Flotation (DAF of capacity 750 m^3/hr dosing Lime, $FeSO_4$ and Poly Electrolyte) → Clari-Flocculator (1718.75 m^3)→ Sequential Batch Reactor (02, each capacity 4823 m^3) → Chlorine Contact Tank (312.50 m^3, Chlorine dosing)→ Treated water Tank (1000 m^3) → Thickener (01 of capacity 398.94 m^3) → Screw Press (03 nos of capacity each 25 m^3/hr). The CETP has installed two C-tech Basin (SBR Tanks) which operates in cyclic batch mode having total cycle time 6hr (Filling and Aeration Phase-3 hr + Settling Phase-02 hr + Decanting Phase-01 hr). 04 Nos. of cycles per day /basin is carried out as informed by the CETP operator.

4. *The consent to operate granted to 15 MLD CETP under the Water Act, 1974 was valid upto 04/01/2023*, whereas the Consent to Operate under the Air Act, 1981 is valid upto 31/03/2025. *The Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 was valid upto 04/01/2023*. ***The 15 MLD CETP was found operating without valid consent to operate under the Water Act, 1974 and Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016, at the time of Inspection***. The CETP operator applied for renewal of consents under Water Act and Authorization to PPCB on 07/09/2023.

5. The chemical sludge from Dissolved Air Flotation (DAF) is collected in the Primary Sludge sump and then passed through a thickener. The thickened sludge is collected in the thickened

sludge sump. The thickened sludge is fed into a belt press for dewatering. The filter cake obtained from the above step is sent to the Paddle dryer to further reduce the water content and the solids recovered from Paddle dryer is sent to the TSDF. The filtrate from the decanters is sent to main pumping station for further treatment.

6. It was observed that the CETP has provided sludge storage facility and obtained membership from TSDF, M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited), Nimbua Derabassi, Punjab, for disposal of sludge. The CETP had disposed 602.685 MT sludge during the period from 02.04.2023 to 31.03.2024 through TSDF against authorized capacity of 735 MT/annum.

7. The CETP has installed one Boiler of 1 TPH capacity based on wood as fuel, for producing steam, which is used for drying of the CETP sludge. The boiler is using wood as fuel. Boiler and hot emission of paddle dryer is emitted through common stack after passing through wet scrubber as air pollution control device.

8. It was observed by CPCB team that :

   i. ***The CETP is discharging treated effluent into Budha Nallah through a dedicated underground pipeline at around 5 Km from the CETP.*** *However, as per the Environmental Clearance (EC) issued by MoEF&CC to the CETP dated 08/12/2014, the CETP is required to establish a Zero Liquid Discharge (ZLD) System.*

   ii. Further, the Examination of documents shared by CETP with CPCB revealed that ***it was decided in the meeting of Appraisal Committee of MoEF&CC held on 03/03/2016 that 15 MLD CETP will be installed in two phases that is Phase 1: Non-ZLD Operation with discharge of treated effluent in Budda Nallah and Phase 2: Zero Liquid Discharge***. A communication in this regard was also sent by MoEF&CC to PPCB vide letter dated 18/03/2016 on the Subject: "Follow up of the Minutes of the Appraisal Committee Meeting on CETPs held on 03/03/2016".

   iii. Subsequently, a letter No. 2836 dated 21/04/2016 was ***issued by PPCB to Bahadurke Textile & Knitwear Association, communicating that 15 MLD CETP has to achieve the stringent standards with regard to Oil & Grease (nil mg/l), COD (50 mg/l), BOD (10 mg/l), TSS (20 mg/l), TDS (2100 mg/l), Sulphide (0.01 mg/l), Phenolic Compounds (nil mg/l) and Total Chromium (Nil mg/l) parameters, for discharge of 15 MLD treated trade effluent into***

Budda Nallah, which is to be used as carrier for irrigation purpose. Such prescribed standards are stringent as compared to the standards notified by MoEF&CC vide notification 4 (E), dated 1/1/2016 for discharge of treated CETP effluent into inland surface water.

iv. ***The consent to operate under Water Act, 1974, was granted to 15 MLD CETP by PPCB on 11/9/2020 with validity upto 31/03/2021, for discharging treated effluent into Budda Nallah***. The CTO was further renewed upto 04/01/2023. CTO has not been renewed by PPCB beyond 04/01/2023**.**

9. The grab samples collected by CPCB team from 15 MLD CETP from the following points (**Table 10**) were analyzed in CPCB Head Office laboratory:

Table 10: **15 MLD CETP Sampling Locations.**

S. No.	Description of sampling locations
1.	Inlet of CETP
2.	Outlet of Equalization Tank
3.	Inlet to SBR
4.	Final outlet of CETP (after Chlorination)
5.	SBR Tank

16. The analysis results of samples collected by CPCB presented in **Table 11**. The PPCB has not prescribed inlet standards for 15 MLD CETP.

Table 11: Analysis results of the samples collected from 15 MLD CETP.

Parameters (All values are in mg/l except pH)	Inlet of CETP	Outlet Equalization Tank	Inlet of SBR	Final treated effluent after Chlorination	MoEF&CC notified Std. vide notification . 4 (E), dated 1/1/2016 for discharge into inland surface water and Stringent standards prescribed for 15 MLD CETP by PPCB (Given in parenthesis) .
pH	7.3	7.1	7.4	7.6	6-9
Oil and Grease	BDL	--	--	BDL	10 (NIL)
COD	411	419	144	**330**	250 (50)
BOD	258	200	56	**123**	30 (10)
TSS	393	318	69	52	100 (20)
TDS	3828	4264	4416	3776	2100 (2100)
FDS	3472	3900	4180	**3492**	2100
Cl^-	1805	1900	1995	**1948**	1000
TKN	20	--	--	13	50

NH_3-N	13	--	--	02	50
PO_4-P	1.64	0.5	0.06	0.51	5
NO_3-N	11.88	1.62	4.27	2.34	10
SO_4	42	474	517	42	1000
Fluoride	**0.4**	1.9	1.2	0.5	2.0
Sulphide	7.2	--	--	**6.0**	2.0 (0.01)
Phenolic compounds as C_6H_5OH	1.45	--	--	0.97	1.0 (NIL)

10. ***As per analysis results of the samples collected by CPCB team, 15 MLD CETP was found to be non-complying with regard to COD (330 mg/l > Prescribed limit of 250 mg/l), BOD (123 mg/l > Prescribed limit of 30 mg/l), FDS (3492 mg/l > prescribed limit of 2100 mg/l), Sulphide (6.0 mg/l > prescribed limit of 2 mg/l) and Chloride (1948 mg/l > prescribed limit of 1000 mg/l) parameters.***

11. ***15 MLD CETP is also not complying with the stringent standards prescribed by PPCB for discharge into Budda Nallah, for COD (330 mg/l > Prescribed limit of 50 mg/l), BOD (123 mg/l > Prescribed limit of 10 mg/l), TSS (52 mg/l > Prescribed limit of 20 mg/l) , TDS, (3776 mg/l > prescribed limit of 2100 mg/l), Sulphide (6.0 mg/l > prescribed limit of 0.1 mg/l) and Phenolic Compounds (0.97 mg/l > prescribed limit of Nil mg/l) parameters.***

12. The samples collected by CPCB team from inlet and outlet of CETP were also analyzed for the presence of heavy metals and the analysis results are presented in **Table 12**.

Table 12: Analysis results of heavy metal parameters.

Sampling Locations	Sample Codes	T-Cr	Cr^{+6}	Cd	Cu	Mn	Pb	Zn	Ni	As	Fe	Se	V
Inlet of CETP	CT-C1	0.018	BDL	BDL	0.168	1.337	BDL	0.068	0.041	BDL	5.273	BDL	0.193
Final outlet	CT-C5	BDL	BDL	BDL	BDL	0.163	BDL	0.021	0.01	BDL	1.501	BDL	0.011
Prescribed limits (All values are in mg/l) (Stringent standards prescribed for 15 MLD CETP by PPCB (Given in parenthesis)		02 (NIL)	0.1	03	0.05	02	0.1	05	03	0.2	03	0.05	0.2

13. The concentration of heavy metal parameters in the samples collected by CPCB from 15 MLD CETP were found within the limits prescribed by MoEF&CC and PPCB.

14. ***The overall performance of CETP with regard to removal efficiency of COD, BOD, TSS, FDS, Chloride and Sulphide based on the analyzed concentration of respective parameters was***

found to 21.2%, 38.5%, 83.6%, 3.2%, 0% and 16.7% respectively which needs improvement to achieve the prescribed standards.

15. ***The biomass concentrations in the SBR basin in terms of MLSS and MLVSS were found as 2175 mg/l and 807 mg/l respectively, with MLVSS/MLSS ratio as 0.37, which is too low to operate biological treatment system efficiently, as indicated from very low COD and BOD removal efficiency. The recommended MLVSS/MLSS ratio is 0.6 to 0.8.***

16. Online Continuous Effluent monitoring system (OCEMS) is installed at inlet and final outlet of CETP for measuring pH, TSS, COD and BOD. The Online Continuous Effluent Monitoring System (OCEMS) was last calibrated on May 12, 2024. The variation was observed in the lab analysis value and the OCEMS value on the day of inspection as presented in **Table 13**:

Table 13: **Comparison of Laboratory Analysis Values with OCEMS Values.**

Sampling location	Analysis results/Grab	Date/time	Parameters			
Final outlet of CETP		6.04 PM	pH	TSS	COD	BOD
	Lab data	24/12/24	7.60	52	330	123
	OCEMS data	24/12/24	7.95	16.2	79.5	19.9
% Variation w.r.t. Laboratory Data			(+) 4.6	(-) 68.84	(-) 75.90	(-) 83.82

A wide variation was observed in the lab analysis value and the OCEMS value on the day of inspection. The OCEMS values for TSS, COD and BOD were found to be 69% to 84% lower in comparison to laboratory analysis values, which indicates improper calibration.

2.1.3 500 KLD CETP, Phase-VIII, Focal Point, Ludhiana:

2. The CETP is designed to treat 500 KLD effluent generated from electroplating, metal finishing industries, and allied industries located across Punjab, excluding Mohali, District Fatehgarh Sahib, Patiala, Khanna, and Rupnagar. The CETP is operating with flow rate of 400 KLD, thus utilizing 80% of its capacity.

3. The CETP receives raw effluent through dedicated tankers from member units through vehicles (54 in number) equipped with GPS system for carrying effluent. The PPCB has not prescribed inlet standards for CETP.

4. The CETP operator has installed electromagnetic flow meter at outlet of Tube settler, R.O Feed, R.O Permeate R.O Reject and records of the same were found maintained.

5. The CETP has obtained consent to operate under water act with validity upto 30/06/2027 and under the Air Act, 1984 with validity upto 30/06/2028. The Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 is valid upto 06.08.2029

6. The 500 KLD CETP is operated based on Physico-chemical treatment followed by filtration, two stage Reverse Osmosis (RO) and Evaporator. The CETP is comprised of the components namely Raw effluent collection Tank- (162.5m^3)→ Oil & Grease removal System → Equalization Tank (02 each 750 KL x 2) → Reaction Tank (04 No's, 26.3 m^3 x 2 + 18.64 m^3 x 1 + 35.65 m3 x 1) (adding lime + Sodium metabisulfite + poly electrolyte)→ Primary Tube Settler (6 No's, 20.62 m^3 x 5 + 15 m^3 x 1) → Secondary Tube Settler (6 No's, 12.83 m^3) → Clarifier (235.5 m^3) → Sand Filter → Activated Carbon Filter (1.58 m^3 x 1 + 1.727 m^3 x 2) → Anion Ion exchange Unit (5.46 m^3) → Cation Ion Exchange Unit (5.46 m3) → Reverse Osmosis (500 m3/day) → Evaporator Vessels (04, each 7.84 m3) → Sludge Thickener → Dryer (01)→ Centrifuge → Sludge Drying Beds (04 No's).

7. The CETP operator has installed one Thermopac of 1 Lac KCal/hr capacity, to produce steam for utilization in the evaporation plant for treatment of R.O Reject.

8. The CETP has provided sludge storage room of (24 ft x 15 ft x 10 ft) size for storage of the CETP sludge and obtained membership from TSDF, M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited) for final disposal of CETP sludge. The CETP had disposed 738.87 MT sludge during the period of 01.04.2023 to 31.03.2024 through TSDF against the authorized capacity of 540.24 MT/annum.

9. The CETP operator has installed 03 KLD Sewage Treatment Plant (STP) based on Moving Bed Biofilm Reactor (MBBR) technology for treatment of domestic wastewater. The STP is comprised of Collection Tank > MBBR Reactor > Tube Settler > Filter Press > Treated water Tank. The treated effluent of STP is used for inhouse plantation.

10. The grab samples collected by CPCB team from 500KLD CETP from the following points (**Table 14**) were analyzed in CPCB Head Office laboratory:

Table 14: 500 KLD CETP Sampling Locations.

S. No.	Description of sampling locations
1.	Equalization Tank of CETP
2.	Outlet of Tube Settler
3.	R.O. Feed
4.	Final outlet (R.O permeate)

11. The analysis results of samples collected by CPCB presented in **Table 15**.

Table 15: Analysis results of the samples collected from 500 KLD CETP.

Parameters (All values are in mg/l except pH)	Outlet of Equalization Tank	Outlet of Tube settler	Inlet of R.O Feed	Final outlet (R.O permeate)	MoEF&CC notified Std. vide Notification S.O. 4 (E), dated 1/1/2016
pH	< 2.0	8.2	7.3	7.5	6-9
Oil and Grease	BDL	--	--	BDL	10
COD	2162	396	59	65	250
BOD	1570	137	27	28	30
TSS	--	81	17	< 10	100
TDS	--	8340	2672	1016	--
FDS	--	7408	1920	680	2100
Cl^-	--	3135	998	63	1000
TKN	156	--	--	BDL	50
NH_3-N	150	--	--	< 1	50
PO_4-P	3.47	BDL	0.08	0.71	5
NO_3-N	BDL	14.4	12.0	**12.69**	10
SO_4	28	669	495	149	1000
Fluoride	1.1	15.5	3.1	0.9	1.0
Sulphide	6.8	--	--	**4.0**	2.0
Phenol compounds as C_6H_5OH	1.41	--	--	BDL	1.0

12. As per analysis results of the samples collected by CPCB team, 500 KLD CETP was found to be non-complying with regard to Sulphide (4.0 mg/l > prescribed limit of 2 mg/l) and Nitrate (12.69 mg/l > prescribed limit of 10 mg/l) parameters.

13. The samples collected by CPCB team from inlet and outlet of CETP were also analyzed for the presence of heavy metals and the analysis results are presented in **Table 16**.

Table 16: Analysis results of heavy metal parameters.

Sampling Locations	Sample Codes	T-Cr	Cr^{+6}	Cd	Cu	Mn	Pb	Zn	Ni	As	Fe	Se	V
Inlet of CETP	CT-D1	193.2	BDL	0.054	35.1	78.1	13.3	1355	108.5	0.08	11650	0.586	0.2
Final outlet	CT-D4	BDL	BDL	BDL	0.026	0.106	0.008	0.021	BDL	BDL	0.278	BDL	BDL
Prescribed limits (All values are in mg/l) prescribed by MoEF&CC vide notification . 4 (E), dated 1/1/2016 for discharge into inland surface water.		02	0.1	03	0.05	02	0.1	05	03	0.2	03	0.05	0.2

14. The concentration of heavy metal parameters in the samples collected by CPCB from 500 KLD CETP were found within the prescribed limits.

15. The overall performance of CETP with regard to removal efficiency of COD, BOD, TSS and FDS parameters was found to be 83.6% , 79.5%, 87.6% and 90.8% respectively, which is adequate to meet the limits prescribed for respective parameters. ***The overall performance of CETP with regard to removal efficiency of NO_3-N and Sulphide parameters was found to be 9.3% and 71.6% respectively, requires improvement to achieve to prescribed limits.***

16. The treated effluent (RO Permeate) of 500 KLD CETP is used for cooling tower makeup water, plantation, gardening, watering to MC parks, DC office, NH-95, construction work as per CTO granted by PPCB. The CETP has also entered into an agreement with M/s Vardhman Special Steels Limited C-58, Focal Point Phase-3, Ludhiana, for taking 100 KLD treated effluent through tankers. Since, 500 KLD was installed before 2006, EIA notification is not applicable and the CETP was not required to obtain environmental clearance.

17. The CETP operator has installed OCEMS (flow meter and PTZ Camera) at final outlet/ RO permeate, and is connected to CPCB/PPCB server.

2.2. Summary of Performance Evaluation of CETPs conducted by CPCB Team:

2.2.1. 40 MLD CETP, Tajpur Road:

The overall performance of CETP with regard to removal efficiency of COD, BOD and Suspended Solids parameters based on analyzed concentration of respective parameters at inlet and outlet was found to be 95.10%, 93.75 % and 92.47% respectively, which was found to be adequate to achieve

the prescribed norms. However, the overall removal efficiency of FDS, Chloride and Sulphide parameters based on analyzed concentration of respective parameters was found to be 6.28 %, 22.36% and 0% respectively, requires improvement to achieve to prescribed limits. The biomass concentrations in the SBR basin in terms of MLSS and MLVSS were found as 3515 mg/l and 2510 mg/l respectively. The MLVSS/MLSS ratio was found to be 0.70. The MLVSS /MLSS ratio between 0.6-0.8 indicates satisfactory operation of biological treatment system (SBR)

2.2.2. 50 MLD CETP, Tajpur Road:

The overall performance of CETP with regard to removal efficiency of COD, BOD and Suspended Solids parameters was found to be 85 %, 87 % and 71% respectively, which was found adequate to achieve the prescribed norms. However, the overall performance with regard to removal efficiency for BOD, Chloride, Sulphide and Phenolic compounds parameters based on the analyzed concentration of respective parameters was found to be 87%, 20.5%, 25% and 0% respectively, requires improvement to achieve to prescribed limits. The biomass concentrations in the SBR basin in terms of MLSS and MLVSS were found as 5456 mg/l and 2849 mg/l respectively. The MLVSS/MLSS ratio was found to be 0.52, which is lower than the recommended ratio of 06-0.8. The MLVSS /MLSS ratio between 0.6-0.8 indicates satisfactory operation of biological treatment system (SBR)

2.2.3. 15 MLD CETP, Bahadur Ke Road, Ludhiana:

The overall performance of CETP with regard to removal efficiency of COD, BOD, TSS, FDS, Chloride and Sulphide based on the analyzed concentration of respective parameters was found to be 21.2%, 38.5%, 83.6%, 3.2%, 0% and 16.7% respectively, requires improvement to achieve to prescribed limits. The biomass concentrations in the SBR basin in terms of MLSS and MLVSS were found as 2175 mg/l and 807 mg/l respectively, with MLVSS/MLSS ratio as 0.37, which is too low to operate biological treatment system efficiently, as indicated from very low COD and BOD removal efficiency. The recommended MLVSS/MLSS ratio is 0.6 to 0.8.

2.2.4. 500 KLD CETP, Phase-VIII, Focal Point, Ludhiana:

The overall performance of CETP with regard to removal efficiency of COD, BOD, TSS and FDS parameters was found to be 83.6% , 79.5%, 87.6% and 90.8% respectively, which is adequate to meet the limits prescribed for respective parameters. The overall performance of CETP with regard to removal efficiency of NO3-N and Sulphide parameters was found to be 9.3% and 71.6% respectively, requires improvement to achieve to prescribed limits.

2.3. Non-compliances/Violations observed by CPCB Team:

The non-compliances/violations observed by CPCB Team are summarized in the following **Table 17**:

Table 17: Summary of the non-compliances/violations observed by CPCB Team.

S.No.	CETP	Non-compliances/Violations observed by CPCB Team
1	40 MLD CETP, Tajpur Road, Ludhiana	1. The CETP is ***non-complying with regard to concentration of FDS (3760 mg/l > prescribed limit of 2100 mg/l), Sulphide 3.6 mg/l > prescribed limit of 2 mg/l) and Chloride (1805 mg/l > prescribed limit of 1000 mg/l) parameters.*** 2. ***The CETP is discharging treated effluent into Budha Nallah*** through an underground pipeline and this treated effluent meets River Sutlej after travelling a distance of about 24-25 km. However, ***as per the Environmental Clearance (EC) issued by MoEF&CC to the CETP dated 03.05.2013, "the treated wastewater will be used for irrigation," and it is also stated in the special terms and conditions that "there shall be no discharge into Budha Nallah." The CETP is not complying with the disposal condition stipulated in the environmental clearance issued by Ministry of Environment. Forest and Climate Change.*** 3. ***The CETP is operating without valid consent to operate under Water Act, 1974***. 4. ***A wide variation was observed in the lab analysis value and the OCEMS value on the day of inspection, which indicates improper calibration of OCEMS.***
2	50 MLD CETP, Tajpur Road, Ludhiana	**1.** The CETP is ***non-complying with regard to BOD (54 mg/l > Prescribed limit of 30 mg/l), FDS (2364 mg/l > prescribed limit of 2100 mg/l), Sulphide (2.4 mg/l > prescribed limit of 2 mg/l), Chloride (1283 mg/l > prescribed limit of 1000 mg/l) and Phenolic Compounds (3.62 mg/l > Prescribed Limit of 1.0 mg/l) parameters.*** **2.** ***The CETP is discharging treated effluent into Budha Nallah through an underground conveyance channel***, which ultimately meets River Sutlej. ***As per environment clearance granted to the CETPs. The treated water shall not be discharged into Buddha Nallah. The CETP is not complying***

		with the disposal condition stipulated in the environmental clearance issued by Ministry of Environment. Forest and Climate Change. 3. ***The CETP is operating without valid consent to operate under Water Act, 1974 and without valid Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016.*** 4. ***A wide variation was observed in the lab analysis value and the OCEMS value on the day of inspection, indicating improper calibration of OCEMS.***
3	15 MLD CETP, Bahadur Ke Road, Ludhiana	1. The CETP is ***non-complying with regard to COD (330 mg/l > Prescribed limit of 250 mg/l), BOD (123 mg/l > Prescribed limit of 30 mg/l), FDS (3492 mg/l > prescribed limit of 2100 mg/l), Sulphide (6.0 mg/l > prescribed limit of 2 mg/l) and Chloride (1948 mg/l > prescribed limit of 1000 mg/l) parameters prescribed by MoEF&CC vide notification 4 (E), dated 1/1/2016 for discharge into inland surface water.*** **5.** ***The CETP is also not complying with the stringent standards prescribed by PPCB for discharge into Budda Nallah, for COD (330 mg/l > Prescribed limit of 50 mg/l), BOD (123 mg/l > Prescribed limit of 10 mg/l), TSS (52 mg/l > Prescribed limit of 20 mg/l) , TDS, (3776 mg/l > prescribed limit of 2100 mg/l), Sulphide (6.0 mg/l > prescribed limit of 0.1 mg/l) and Phenolic Compounds (0.97 mg/l > prescribed limit of Nil mg/l) parameters.*** **6.** *As per the Environmental Clearance (EC) issued by MoEF&CC to the CETP dated 08/12/2014,* ***the CETP is required to establish a Zero Liquid Discharge (ZLD) System****. However, it was decided in the meeting of Appraisal Committee of MoEF&CC held on 03/03/2016* ***that 15 MLD CETP will be installed in two phases that is Phase 1: Non-ZLD Operation with discharge of treated effluent in Budda Nallah and Phase***

		2: Zero Liquid Discharge. *A communication in this regard was also sent by MoEF&CC to PPCB vide letter dated 18/03/2016 on the Subject: "Follow up of the Minutes of the Appraisal Committee Meeting on CETPs held on 03/03/2016".* ***PPCB vide letter No. 2836 dated 21/04/2016 prescribed the stringent standards with regard to Oil & Grease (nil mg/l), COD (50 mg/l), BOD (10 mg/l), TSS (20 mg/l), TDS (2100 mg/l), Sulphide (0.01 mg/l), Phenolic Compounds (nil mg/l) and Total Chromium (Nil mg/l) parameters, for discharge of 15 MLD treated trade effluent into Budda Nallah****, which is to be used as carrier for irrigation purpose. Such prescribed standards are stringent as compared to the standards notified by MoEF&CC vide notification 4 (E), dated 1/1/2016 for discharge of treated CETP effluent into inland surface water.* ***The consent to operate under Water Act, 1974, was granted to 15 MLD CETP by PPCB on 11/9/2020 with validity upto 31/03/2021, for discharging treated effluent into Budda Nallah****. The CTO was further renewed upto 04/01/2023.* ***CTO has not been renewed by PPCB beyond 04/01/2023.*** 2. ***CETP is discharging treated effluent into Budha Nallah through a dedicated underground pipeline without complying with the stringent parameters prescribed by PPCB, for this purpose and also without having valid consent to operate under Water Act, 1974.*** 3. ***The CETP is operating without valid consent to operate under Water Act, 1974 and without valid Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016****.* 4. ***A wide variation was observed in the lab analysis value and the OCEMS value on the day of inspection, which indicates improper calibration.***

4	500 KLD CETP, Phase-VIII, Focal Point, Ludhiana	1. ***CETP is non-complying with regard to Sulphide (4.0 mg/l > prescribed limit of 2 mg/l) and Nitrate (12.69 mg/l > prescribed limit of 10 mg/l) parameters.***

2.4. Directions issued by CPCB for the required action to be taken:

Based on the non-compliances observed during inspection and monitoring of 04 common effluent treatment plant (CETPs) located in Ludhiana during April 22-23, 2024, CPCB has issued Direction dated 12.08.2024 (copy given at **Annexure 1**) under Section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974 to Punjab Pollution Control Board to take appropriate action.

Subsequent to the directions issued by CPCB, Punjab Pollution control board has issued the following directions under section 33 A of the Water (Prevention and Control of Pollution) Act, 1974 vide letter dated 25.09.2024 to 50 MLD CETP (copy given at **Annexure 2**) and vide letter dated 26/09/2024 to 40 MLD and 15 MLD (copies given at **Annexure 3** and **4**)

1) *That, the SPV shall meet with the prescribed discharge standards and to comply with the disposal conditions mentioned in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change.*

2. *That, the SPV shall immediately stop the discharge of effluent from the CETP into Buddha Nallah or any other surface water body.*

As similar non-compliances have been observed by CPCB team during this inspection and monitoring of CETPs also carried out during December 24-25,2024, the compliance of the above directions issued by CPCB and the directions issued by PPCB need to be ensured by Punjab Pollution Control Board in a time bound matter.

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MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE, GOVT. OF INDIA

Speed Post

CPCB/IPC-VII/CETP-Ludhiana/ 3547 Dated: 12.08.2024

To

The Member Secretary
Punjab Pollution Control Board
Vatavaran Bhawan, Nabha Road
Patiala Punjab

Subject: **Directions under section 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974 regarding non-compliance status of four CETPs namely A. 40 MLD CETP- near Central Jail, Tajpur Road (Focal Point Module), Ludhiana, Punjab, B. 50 MLD CETP Tajpur-Rahon Road Cluster, Ludhiana, near Central Jail, Tajpur Road, Ludhiana, Punjab, C. 15 MLD CETP- Bahadurke Road, Ludhiana, Punjab and D. 500 KLD CETP, Plot No. D-260-261, Phase-VIII, Focal Point, Ludhiana, Punjab.**

WHEREAS, amongst others, under Section 17 of the Water (Prevention & Control of Pollution) Act, 1974, one of the functions of the State Pollution Control Board (SPCB), (or Pollution Control Committee for Union Territories) constituted under the Water (Prevention & Control of Pollution) Act, 1974 is to plan a comprehensive programme for prevention, control or abatement of pollution of streams and wells located in the State and to secure the execution therefore; and

WHEREAS, amongst others, under Section 16 of the Water (Prevention & Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, one of the functions of the Central Pollution Control Board (CPCB), constituted under the Water (Prevention & Control of Pollution) Act, 1974 is to coordinate activities of the State Pollution Control Boards and Pollution Control Committees and to provide technical assistance and guidance to SPCBs/PCCs; and

WHEREAS, amongst others, under Section 16 of the Water (Prevention & Control of Pollution) Act, 1974, one of the functions of the Central Pollution Control Board (CPCB), is to promote cleanliness of streams and wells in different areas of the State; and

WHEREAS, the Central Government has notified the standards for discharge of environmental pollutants from various categories of industries, Common Effluent Treatment Plants (CETPs) and Sewage Treatment Plants (STPs) under the Environment (Protection) Act, 1986 and the rules framed there under; and

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WHEREAS, there is a need to inculcate the habit of self-monitoring within the CETPs for complying with the prescribed standards and this can be achieved by installing Online Continuous Effluent Monitoring System (OCEMS); and

WHEREAS, four CETPs namely (i) CETP - 40 MLD near Central Jail, Tajpur Road (Focal Point Module), Ludhiana, Punjab, (ii) CETP - 50 MLD Tajpur-Rahon Road Cluster, Ludhiana, near Central Jail, Tajpur Road, Ludhiana, Punjab, (iii) CETP - 15 MLD Bahadurke Road, Ludhiana, Punjab and (iv) CETP - 500 KLD CETP, Plot No. D-260-261, Phase-VIII, Focal Point, Ludhiana, Punjab were inspected by CPCB officials along with officials of Punjab PCB during 22.04.2024 and 23.04.2024 based on the communication of the Central Monitoring Committee (CMC) with CPCB. Following major observations were made:

A. **CETP - 40 MLD, near Central Jail, Tajpur Road (Focal Point Module), Ludhiana, Punjab (herein after referred as CETP):**

I. During the visit on 22.04.2024, the CETP was found operational with the flow rate of 29 MLD. The CETP receives effluent through dedicated underground pipeline and the treatment is based on Sequential Batch Reactor (SBR) technology. It was informed that the CETP is discharging the treated effluent into Budha Nallah (which meets River Sutlej) through underground pipeline from CETP. However, as per the Environmental Clearance (EC) issued by MoEF&CC to the CETP dated 03.05.2013, "the treated wastewater will be used for irrigation" and it is also mentioned in the special terms & conditions that, "*There shall be no discharge into Budha Nallah*".

II. The consent under the Air Act, 1981 is valid upto 29.12.2024 and the Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 is valid upto 19.12.2024 for the operation of 40 MLD CETP. However, the consent under the Water Act, 1974 was valid till 15.05.2023. The CETP has applied for renewal of consent to PPCB on 07.09.2023.

III. It was reported that 72 Dyeing and Printing units have obtained membership from CETP. It was also informed by the CETP operator that inlet norms for CETP is not prescribed in the consent.

IV. Grab samples were collected from the CETP during monitoring. The analysis result of samples collected from CETP outlet reveals that BOD:54 mg/l (Standard: 30 mg/l), COD:262 mg/l (Standard:250 mg/l), Chloride:2284 mg/l (Standard: 1000 mg/l)) and Sulphide:2.4 mg/L (Standard: 2 mg/l) exceeds the notified effluent discharge standards for CETP. Remaining monitored parameters are within the prescribed standards.

V. Grab sample were also collected from the Sequential Batch Reactor (SBR) tank for MLSS & MLVSS. The analysis result reveals that the concentration of MLSS: 4661 mg/l (Designed range: 5000-7000 mg/l) and concentration of MLVSS: 3000 mg/l (Designed range: 3500-4200 mg/l) are less than the designed range, which indicates the poor operation of the SBR.

VI. The CETP has installed Online Continuous Effluent Monitoring System (OCEMS) at the final outlet of treated effluent for the parameters- pH, TSS, COD, BOD with connectivity to PPCB & CPCB servers. During the visit, the OCEMS was found operational and variation in OCEMS reading compared with the monitored results was also reported which indicates the improper working / validation / calibration of OCEMS system.

VII. The CETP has provided sludge storage facility and obtained membership from M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited). The CETP had disposed 3517.235 MT sludge (as per the log book records) during the year 2023-24.

B. **CETP - 50 MLD, Tajpur-Rahon Road Cluster, Ludhiana, near Central Jail, Tajpur Road, Ludhiana, Punjab.**

I. During the visit on 22.04.2024, the CETP was found operational with the flow rate of 46 MLD. The CETP receives effluent through dedicated underground pipeline and the treatment is based on Sequential Batch Reactor (SBR) technology. It was informed that as per the consent, the CETP is permitted to discharge the treated effluent into Budha Nallah (which meets River Sutlej) through underground pipeline from CETP. However, as per the EC issued by MoEF&CC to the CETP dated 03.05.2013, "the treated wastewater will be used for irrigation" and it is also mentioned in the special terms & conditions that, "*There shall be no discharge into Budha Nallah*".

II. The consent under the Air Act, 1981 is valid upto 31.03.2026 for the operation of 50 MLD CETP. However, the Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 was valid till 04.12.2023 and the consent under the Water Act, 1974 was valid till 22.08.2023. The CETP has applied for renewal of consent and authorization to PPCB on 31.08.2023.

III. It was reported that 110 Dyeing and Printing units have obtained membership from CETP. It was also informed by the CETP operator that inlet norms for CETP is not prescribed in the consent.

IV. Grab samples were collected from the CETP during monitoring. The analysis result of samples collected from CETP outlet reveals that BOD: 128 mg/l (Standard: 30

mg/l), COD: 382 mg/l (Standard: 250 mg/l) and Chloride: 1713 mg/l (Standard: 1000 mg/l) exceeds the notified effluent discharge standards for CETP. Remaining monitored parameters are within the prescribed standards.

V. Grab sample were also collected from the Sequential Batch Reactor (SBR) tank for MLSS & MLVSS. The analysis result reveals that the concentration of MLSS: 300 mg/l (Designed value: 5000 mg/l) and concentration of MLVSS: 215 mg/l (Designed value: 4000 mg/l) are less than the designed values, which indicates the poor operation of the SBR.

VI. The CETP has installed Online Continuous Effluent Monitoring System (OCEMS) at the final outlet of treated wastewater for the parameters- pH, TSS, COD, BOD with connectivity to PPCB & CPCB servers. During the visit, the OCEMS was found operational and variation in OCEMS reading compared with the monitored results was also reported which indicates the improper working / validation / calibration of OCEMS system.

VII. During the visit, it was observed that the CETP has provided sludge storage facility and obtained membership from M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited) for disposal of sludge. The CETP had disposed 1597.20 MT sludge during the year 2023-24 through TSDFand further, as per log book records, about 173 MT was stored in the premises.

C. CETP - 15 MLD CETP- Bahadurke Road, Ludhiana, Punjab.

I. During the visit on 22.04.2024, the CETP was found operational with the flow rate of 11.26 MLD. The CETP receives effluent through dedicated underground pipeline and the treatment is based on Sequential Batch Reactor (SBR) technology. It was informed that the CETP is discharging the treated effluent into Budha Nallah (which meets River Sutlej) through underground pipeline from the CETP. However, as per EC issued by MoEF&CC on 08.12.2014, the CETP is required to establish a Zero Liquid Discharge system.

II. The consent under the Air Act, 1981 is valid upto 31.03.2025 for the operation of 15 MLD CETP. However, the consent under the Water Act, 1974 was valid till 04.01.2023 and the Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 was valid till 04.10.2022 for which the CETP has applied for renewal to PPCB.

III. It was reported that 36 Dyeing/Printing/washing units have obtained membership from CETP and connected to the CETP at the time of visit. It was also informed by the CETP operator that inlet norms for CETP is not prescribed in the consent.

IV. Grab samples were collected from the CETP during monitoring. The analysis results of sample collected from CETP outlet reveals that BOD: 243 mg/l (Standard: 30 mg/l), COD: 587 mg/l (Standard: 250 mg/l), Chloride: 1904 mg/l (Standard: 1000 mg/l) and Sulphide: 16 mg/l (Standard: 2 mg/l) exceeds the notified effluent discharge standards for CETP. Remaining monitored parameters are within the prescribed standards.

V. Grab samples were collected from the Sequential Batch Reactor (SBR) tank for MLSS & MLVSS. The sample analysis results reveals that the concentration of MLSS: 2639 mg/l (Designed value: 4840 mg/l) and concentration MLVSS: 1179 mg/l (Designed value: 3872 mg/l) are less than the designed values, which indicates the poor operation of the SBR.

VI. The CETP has installed Online Continuous Effluent Monitoring System (OCEMS) at the final outlet of treated effluent for the parameters- pH, TSS, COD, BOD with connectivity to PPCB & CPCB servers. During the visit, the OCEMS was found operational and variation in OCEMS reading compared with the monitored results was also reported which indicates the improper working / validation / calibration of OCEMS system.

VII. During the visit, it was observed that the CETP has provided sludge storage facility and obtained membership from M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited) for disposal of sludge. The CETP had disposed 602.685 MT sludge during the period of 02.04.2023 to 31.03.2024, through TSDF.

D. **CETP - 500 KLD CETP, Plot No. D-260-261, Phase-VIII, Focal Point, Ludhiana, Punjab.**

I. During the visit on 23.04.2024, the CETP was found operational with the flow rate of 450 KLD. It is informed that the CETP receives effluent through dedicated tankers from member units through vehicles (56 in number) equipped with GPS system for carrying effluent. The CETP comprised of physico-chemical process followed by filtration, two stage Reverse Osmosis (RO) followed by evaporator to achieve ZLD as per the consent and EC condition.

II. The Air consent is valid upto 30.06.2028 and the Water consent is valid upto 30.06.2027 for the operation of 500 KLD CETP. However, the Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 was valid till 16.06.2021. It was informed that the CETP has applied for renewal of authorization to PPCB on 01.10.2021.

III. It was reported that 1613 Electroplating industries / Metal Surface Treatment units have obtained membership from CETP and connected to the CETP at the time of

visit. It was also informed by the CETP operator that inlet norms for CETP is not prescribed in the consent.

IV. On the day of visit, it was observed that the flow meters are installed at RO Feed, RO Reject, Evaporators Vessels feed and Evaporator concentrate. It was reported that the CETP have not installed differential pressure gauge system at Cation-Anion and Carbon filter systems which can be used to indicate the choking/scaling of filtration system.

V. During the visit, grab samples were collected from the RO outlet of CETP. The analysis result reveals that treated effluent is complying with the notified discharge standards. Discharge of effluent from the CETP premises was not observed during visit. It is reported that treated effluent (RO Permeate and Condensate) is used for cooling tower makeup water, plantation, gardening, watering to MC parks, DC office, NH-95, construction work. The CETP has also made agreement with M/s Vardhman Special Steels Limited C-58, Focal point Phase-3, Ludhiana, to take 100 KLD treated effluent through tankers for using in different purpose as per requirement. Furthermore, the CETP operator has maintained the records of the treated effluent taken by the users for gardening, construction activities & industrial use and others. The CETP has established an Environmental laboratory.

VI. The CETP has installed OCEMS (Electromagnetic flow meter, PTZ camera) at the final outlet / RO permeate which is connected to CPCB/PPCB portal in compliance of CPCB directions.

VII. The CETP has installed 05 KLD STP with Moving Bed Biofilm Reactor (MBBR) for treatment of domestic wastewater.

AND, NOW, THEREFORE, in exercise of powers conferred under section 18(1) (b) of the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention and control of pollution) Act, 1981, Punjab Pollution Control Board (PPCB) is hereby directed to take appropriate action including imposing environmental compensation and to ensure that CETPs are operated ensuring.

a. Operation/augmentation of the treatment system, appropriately, so as to meet the prescribed discharge standards and to comply with the disposal condition mentioned in the Environmental clearance by MoEF & CC dated 03.05.2013 and 08.12.2014 in the aforesaid 40 MLD, 50 MLD and 15 MLD CETPs. Further, to stop discharging of treated effluent into Buddha Nallah from the 50 MLD CETP, 40 MLD CETP and 15 MLD CETPs.

b. With valid consent under the Water Act-1974 / Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 from PPCB and comply with all the conditions mentioned thereof.

c. Undertaking regular calibration, maintenance and validation of the OCEMS analysers as per standard operating procedures/recommendations of the suppliers, so as to ensure generation of continuous & reliable data.

Further, PPCB is also hereby directed:

a. To prescribe disposal condition to respective CETPs in accordance with the Environmental clearance by MoEF&CC dated 03.05.2013 and 08.12.2014.

b. To prescribe the inlet standard for CETP in accordance to the CETP notification dated 01.01.2016.

c. To regularly undertake verification of member industries of the CETP for ensuring proper operation of PETP/ETP by individual member industry.

The action taken by PPCB be intimated to CPCB within 15 days of receipt of these directions.

(Bharat Kumar Sharma)
Member Secretary

Copy to:

1. **The Chairman** : for information, please.
   Punjab Pollution Control Board
   Vatavaran Bhawan, Nabha Road
   Patiala Punjab

2. **The Additional Secretary (CP Division)** : for information, please.
   Ministry of Environment, Forests & Climate Change,
   Prithvi Wing, 2nd Floor, Indira Paryavaran Bhawan, Jor Bagh Road,
   New Delhi-110 003.

3. **The Regional Director (Chandigarh)**
Central Pollution Control Board
BSNL Telephone Exchange, 2nd Floor
Sector – 49C, Chandigarh - 160047 : for follow-up, please.

4. **Divisional Head, WQM-I,**
CPCB, Delhi : for information, please.

5. **Divisional Head, IPC-VI,**
CPCB, Delhi : for information, please.

6. **Divisional Head, IT**
CPCB, Delhi : for uploading on CPCB website, please.

(Bharat Kumar Sharma)

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ
PUNJAB POLLUTION CONTROL BOARD
LiFE Lifestyle for Environment
Zonal Office-II, E-648-B, Back Side CICU Office, Phase-5, Focal Point, Ludhiana
E-mail: seezo2ldhppcb@yahoo.com Ph No. 0161-2670141

No. PPCB/SEE/ZO-2/LDH/2024/.5825 Regd. Dated ..25/09/24

To

The Chairman,
Punjab Dyers Association 50 MLD CETP Plant,
Backside Central Jail, Tajpur Road, Ludhiana.

Sub: Directions u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988.

Whereas, Punjab Dyers Association (SPV) is operating a Common Effluent Treatment Plant (CETP) of capacity 50 MLD installed for treatment of waste water of the cluster of textiles dyeing industries located at Tajpur Road in Ludhiana.

And whereas, since the inception and commissioning, the SPV of 50 MLD capacity is being pursued by the Board from time to time for the compliance of the provisions of environmental laws especially the Water (Prevention and Control of Pollution) Act, 1974 by way of issuing notices, requests, reminders and affording of opportunities of hearing before the Competent Authority. The officers of the Board are also carrying out the monthly monitoring of the Common Effluent Treatment Plant since the commissioning of the CETP.

And whereas, the SPV was granted consent to operate under Water (Prevention & Control of Pollution) Act, 1974, vide no. CTOW/Fresh/LDH3/2022/18475759 dated 23.08.2022, valid upto 22.08.2023 for the treatment of waste water generated from the cluster of textiles dyeing industries located at Tajpur Road in Ludhiana with following special conditions that:

1. The SPV shall install and connect the flow meters at individual outlets of industries into conveyance system and flow meter at inlet / outlet of CETP with the web-based server by 25.08.2022.
2. The SPV shall complete the construction work of hazardous waste storage room at site by 25.08.2022.
3. The SPV shall submit the feasibility report to reuse treated effluent onto land for irrigation by 25.08.2022.
4. The SPV shall ensure that there is no overflow from the manholes in the conveyance system of CETP 50 MLD at any locations.
5. The SPV shall construct a proper outlet before discharge into Budha Nallah, from where effluent sample can be collected, within 10 days and also install one set of additional OCEMS at the said location, within one month.
6. The SPV shall stabilize the CETP so as to achieve the prescribed standard at the final outlet by 30.09.2022 failing which the Board shall be constrained to refuse consent to operate the outlet & issue closure directions to the member industries & impose Environmental Compensation without any further notice.
7. The SPV shall submit the feasibility report for discharge of treated effluent onto land for irrigation by 25.08.2022.

And whereas, the officer further brought out that in compliance of directions of the Central Monitoring Committee (CMC), CPCB has carried out inspection and monitoring of the Buddha Nallah and River Sutlej on 02.04.2024. The CPCB has also carried out inspection of 04 CETPS located at Ludhiana on 22.04.2024 and issued directions u/s 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974 to the Punjab Pollution Control Board regarding non-compliance of four CETPs of Ludhiana. The CETP of capacity 50 MLD was visited by the team of CPCB and following observations were made:

1. During the visit on 22.04.2024, the CETP was found operational with the flow rate of 46 MLD. The CETP receives effluent through dedicated underground pipeline and the treatment is based on Sequential Batch Reactor (SBR) technology. It was informed to the team that as per the consent, the CETP is permitted to discharge the treated effluent into Buddha Nallah (which meets River Sutlej) through underground pipeline from CETP. However, as per the EC issued by MoEF&CC to the CETP dated 03.05.2013, "the treated wastewater will be used for irrigation" and it is also mentioned in the special terms & conditions that, "There shall be no discharge into Buddha Nallah".
2. The consent under the Air Act, 1981 is valid upto 31.03.2026 for the operation of 50 MLD CETP. However, the Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 was valid till 04.12.2023 and the consent under the Water Act, 1974 was valid till 22.08.2023. The CETP has not got its consent under the Water (Prevention & Control of Pollution) Act, 1974 and authorization under the Hazardous & Other Wastes (Management and Trans-boundary Movement) Rules, 2016 renewed, till date.
3. It was reported that 110 Dyeing and Printing units have obtained membership from common effluent treatment plant, it was also informed by the CETP operator that inlet norms for CETP is not prescribed in the consent.
4. Grab samples were collected from the CETP during monitoring. The analysis result of samples collected from CETP outlet reveals that BOD: 128 mg/l (Standard: 30 mg/l), COD: 382 mg/l (Standard: 250 mg/l) and Chloride: 1713 mg/l (Standard: 1000 mg/l) exceeds the notified effluent discharge standards for CETP. Remaining monitored parameters are within the prescribed standards.
5. Grab sample were also collected from the Sequential Batch Reactor (SBR) tank for MLSS & MLVSS. The analysis result reveals that the concentration of MLSS: 300 mg/l (Designed value: 5000 mg/l) and concentration of MLVSS: 215 mg/l (Designed value: 4000 mg/l) are less than the designed values, which indicates the poor operation of the SBR.
6. The CETP has installed Online Continuous Effluent Monitoring System (OCEMS) at the final outlet of treated wastewater for the parameters pH, TSS, COD, BOD, with connectivity to PPCB & CPCB servers. During the visit, the OCEMS was found operational and variation in OCEMS reading compared with the monitored results was also reported which indicates the improper working / validation / calibration of OCEMS system.
7. During the visit, it was observed that the CETP has provided sludge storage facility and obtained membership from M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited) for disposal of sludge. The CETP had disposed 1597.20 MT sludge during the year 2023-24 through TSDF and further, as per log book records, about 173 MT was stored in the premises.

And whereas, the SPV is violating the provisions of the Water (Prevention & Control of Pollution) Act, 1974.

And whereas, Environmental Engineer, Zonal Office-2, Ludhiana brought out that in light of deficiencies as observed by CPCB team of officers in operation of the CETPs of Ludhiana installed for dyeing units during its visit on 22.04.2024, the Central Pollution Control Board has issued directions u/s 18/1(b) of the Water (Prevention & Control of Pollution) Act, 1974 to the Punjab Pollution Control Board vide letter no. CPCB/IPC-VII/CETP-Ludhiana/3471 dated 12.08.2024 to take appropriate action in the matter including imposition of Environmental Compensation and to ensure that the CETP is operated ensuring:

a) *Operation/ augmentation of the treatment system, appropriately, so as to meet the prescribed discharge standards and to comply with the disposal condition mentioned in the Environmental Clearance by MoEF&CC dated 03.05.2013 and 08.12.2014 in the aforesaid 40 MLD, 50 MLD & 15 MLD CETPs. Further, to stop discharging of treated effluent into Buddha Nallah from 50 MLD, 40 MLD & 15 MLD CETPs.*

b) *With valid consent under the Water Act, 1974/ Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 form PPCB and comply with all the conditions mentioned thereof.*

c) *Undertaking regular calibration, maintenance and validation of the OCEMS analysers as per standard operating procedures/recommendations of the suppliers, so as to ensure generation of continuous & reliable data.*

And whereas, vide the said directions dated 12.08.2024, the Punjab Pollution Control Board has been further directed by Central Pollution Control Board as under:

a. To prescribe disposal condition to respective CETPs in accordance with the Environmental Clearance by MoEF&CC dated 03.05.2013 & 08.12.2014.
b. To prescribe inlet standards for CETP in accordance to the CETP notification dated 01.01.2016.
c. To regularly undertake verification of member industries of the CETP for ensuring proper operation of PETP/ETP by individual member industry.

And whereas, considering the directions issued by the Central Pollution Control Board u/s 18(1) (b) of the Water (Prevention and Control of Pollution) Act, 1974 to the Punjab Pollution Control Board vide letter dated 12.08.2024, notice to issue directions u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988 was issued to the SPV with an opportunity of personal hearing before Chairman of the Board on 13.09.2024 (postponed to 18.09.2024).

And whereas, Sh. Vivek Jindal & Sh. G.P. Singh, Directors of SPV (CETP 50 MLD) and Sh. I.K. Kapila, Advocate, Hon'ble Supreme Court of India attended the hearing and submitted a written reply which was taken on record. At first instance, the representatives had shown disagreement with the technical report of the CPCB in light of assumed technical errors and requested for resampling of the CETP. The representatives further informed that the OCEMS system had been got calibrated. Regarding utilization of treated wastewater for irrigation purposes, no proposal was submitted by the representatives of the SPV. It was further informed that the SPV has applied for obtaining consent to operate under the Water (Prevention & Control of Pollution) Act, 1974 to the Board.

And whereas, during hearing, it was observed by the Competent Authority that the SPV was earlier granted Environmental Clearance by the MoEF&CC on 03.05.2013 with a specific condition that there shall be no discharge into the Buddha Nallah. The SPV is constantly being pursued by the Board to submit proposal / feasibility report to re-use the effluent onto land for irrigation as a condition of consent to operate granted temporarily under the Water (Prevention & Control of Pollution) Act, 1974 as well as in various hearings afforded to the SPV by the Competent Authority / Chairman of the Board. But, the SPV has failed to submit any proposal in this regard and thus the SPV is violating the provisions of Environmental Clearance obtained from the Ministry of Environment, Forest and Climate Change, Government of India. Even after the imposition Environmental Compensation and Bank Guarantee for compliance of environmental norms, the SPV is still violating the provisions of the Water (Prevention & Control of Pollution) Act, 1974 as concluded by the CPCB in its report.

And whereas, the representatives of the SPV could not give any satisfactory reply to the observations raised by the competent authority during the course of hearing.

And whereas, after detailed deliberations and hearing the representatives of SPV, officers of the Board and taking into consideration various factors including the seriousness of the issue, the Chairman of the Board observed that the objective to restrain the discharge of effluent into Budha Nallah cannot be achieved except with the issuance of directions. It is a fit case to invoke the provisions of section 33-A of the Water (Prevention and Control of Pollution) Act, 1974 for issuance of suitable directions to the SPV operating the CETP of 50 MLD capacity at Tajpur Road, Ludhiana. Hence, the Chairman of the Board in exercise of the powers conferred

u/s 33-A of the Water (Prevention and Control of Pollution) Act, 1974 decided to issue the following directions to the SPV of CETP of 50 MLD capacity:

1. *The SPV shall meet with the prescribed discharge standards and to comply with the disposal conditions mentioned in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change dated 03.05.2013.*
2. *The SPV shall immediately stop the discharge of effluent from the CETP of 50 MLD capacity into Buddha Nallah or any other surface water body.*

And whereas, the proceedings of the hearing were conveyed to the industry vide no. 5795-96 dated 25.09.2024.

Now, therefore, the Competent Authority of the Punjab Pollution Control Board, in exercise of the powers conferred upon it u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988, issues the following directions:

1. That, the SPV shall meet with the prescribed discharge standards and to comply with the disposal conditions mentioned in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change dated 03.05.2013.
2. That, the SPV shall immediately stop the discharge of effluent from the CETP of 50 MLD capacity into Buddha Nallah or any other surface water body.

In case of failure to comply with the above said directions, you are liable for action u/s 41 of the Water (Prevention and Control of Pollution) Act 1974 as amended in 1988.

For and on behalf of
Punjab Pollution Control Board

Endst. No. 5806 Dated 25/09/24.

A copy of the above is forwarded to the Environmental Engineer, Punjab Pollution Control Board, Regional Office-3, Ludhiana for information and necessary action. **He is also directed to submit report regarding effective compliance of above said directions, within 3 days positively.**

For and on behalf of
Punjab Pollution Control Board

PUNJAB POLLUTION CONTROL BOARD
Zonal Office-1, E-648-B, Phase-V, Focal Point, Ludhiana
Tele Fax:- 0161-4673789 Website:- www.ppcb.gov.in email:- ppcbzo1ldh@gmail.com

No. 5647 Speed post/Regd. Date 26/09/24

To

M/s Punjab Dyers Association (Focal Point Module),
8.65 Acre Land, Tajpur Road, Jamalpur Awana,
Ludhiana.

Sub: Directions u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988.

Whereas, the Punjab Dyers Association (PDA) was earlier granted consent under the Water Act, 1974 vide no. CTOW/Renewal/LDH1/2024/23519336 dated 28.06.2024 valid upto 30.06.2026 for discharge of trade effluent into Budha Nallah after treatment through CETP of 40 MLD (Focal Point Module) and domestic effluent onto land for plantation through septic tank.

And whereas, the SPV was earlier given personal hearing before Chairman of the Board on 12.06.2023, wherein it was decided that on the basis of best assessment and judgment, an interim amount of Environmental Compensation (EC) of Rs. 75 lacs (Seventy Five Lacs) be imposed on the SPV (CETP 40 MLD, Focal Point Module) for violations made by the SPV and the SPV shall immediately deposit the same in the O/o Environmental Engineer, Regional Office-4, Ludhiana, within one week.

And whereas, the CETP has deposited Environmental Compensation amounting to Rs. 40 Lacs vide RRR1722355084065 dated 21.06.2023 & Rs. 35 Lacs vide RRR1732355120611 dated 22.06.2023.

And whereas, the Central Pollution Control Board (CPCB) has jointly carried out the inspection of Common effluent treatment plant (CETP- 40 MLD Focal Point Module) located in Ludhiana during April 22- 23, 2024 alongwith PPCB officers to verify the compliance status. The observations of the team are as under :-

1. The CETP is designed to treat 40 MLD capacity for treatment of effluent generated from dyeing & printing units located at focal point (Phase 1 to 08). However, presently, CETP operated at flow rate 29.00 MLD. The CETP is utilizing 73% of its capacity.
2. The CETP receives effluent through dedicated underground pipe line from member units to the CETP.
3. Pre-treatment system has not installed at individual member units level prior to send CETP inlet for treatment, as informed by the CETP operator.
4. Team observed that CETP operator has installed Electromagnetic Flow Meter at locations of Inlet receiving chamber, outlet of Equalization Tank, and final outlet of CETP.
5. The CETP is based on physico-chemical followed by biological (SBR) process. The CETP comprised of Receiving Chamber (20.83 m^2) > Coarse Screen (Mechanical Manual) Raw effluent Collection Sump (416.670 m^2) > Stilling Chamber (20.830 m^3) > Fine Screen (mechanical + manual) Manual Grit Chamber (2 No., 81.0 m^3) > Oil & Grease Skimmer > Equalization Tank (20040 m^2) > PH Correction Tank-1 (555.560 m^2 Lime & $FeSO_4$, dosing, RT-20 min) > Sludge Blanket Clarifier (3721.374 m3, Poly Dosing, RT-2.23 hr) > pH Correction Tank-II (138.890 m^3, RT-5 min) > SBR Basins (04), Chlorine Contact Tank (833.33 m3, RT-30 min) Treated Effluent Disposal > Centrifuge > Dryer.
6. The sample analysis result of collected samples from Equalization tank, final outlet of CETP are tabulated below:

Parameters	Sampling Locations		Standards
	Inlet of Equalization Tank	Final outlet of CETP	
Ph	8.2	8.3	6-9
TSS	181	28	100
TDS	4972	4636	--
Chloride	2551	2284	1000
Fluoride	1.1	0.9	2

Sulphate	295	461	1000
Sulphide	--	2.4	2
Phosphate as P	0.7	0.20	5
Ammonical Nitrogen	15	04	50
Nitrate-N	9.3	4.7	10
TKN	20	06	50
Phenol as (C_6H_5OH)	0.2	0.1	1
Oil & Grease	-	BDL	10
BOD	376	54	30
COD	943	262	250

All values are in mg/l except pH

7. It is evident from the above analysis results that the CETP is not complying with the prescribed MoEF & CC effluent norms w.r.t BOD, COD, Sulphide and Chloride.
8. During monitoring, the biomass concentration in the SBR basins MLSS 4661 mg/l (against the designed range 5000-7000 mg/l) MLVSS 3000 mg/l (against the designed range 3500-4200 mg/l) were respectively.
9. The MLSS and MLVSS were found less against designed range which indicates poor operation of the biological system.
10. Team collected samples of heavy metals from inlet and final outlet of CETP to verify the stipulated norms. The analysis results of heavy metal samples are given as below:

Sampling Location	Sample Code	T-Cr	Cd	Cu	Mn	Pb	Zn	Ni	As
I/L of Eq. Tank	40 A1	0.034	BDL	0.081	0.117	BDL	0.151	0.01	BDL
Final O/L	40 A6	BDL	BDL	1.108	0.107	BDL	0.015	0.005	BDL
Prescribed norms		02	0.05	03	02	0.1	05	03	0.2

All values are in mg/l except pH

11. The analysis results of heavy metals revealed that the CETP is complying with the prescribed effluent norms.
12. Online Continuous Effluent monitoring system OCEMS is installed at inlet and final outlet of CETP for measuring influent and effluent waste water quality. On the day of inspection, OCEMS at Inlet and final outlet of CETP were found operational. As informed by the CETP operator OCEMS of final outlet is connected to PPCB/CPCB server. The final outlet OCMES values observed at time of sampling. The relative difference between online data and laboratory analysis data are presented below:

Sampling Location	Analysis results	Date/time 12.00 PM	Parameters			
			pH	TSS	COD	BOD
Final outlet of CETP	Lab Data	22/04/2024	8.3	28	262	54
	Online data	22/04/2024	7.9	46	188	25.7
% Variation w.r.t. Laboratory Data			(-)5.06	(+)64.28	(-)28.24	-52.40

13. The value recorded on line monitoring system values of pH, BOD, COD is lower than the lab analysis data however, value of TSS is higher than lab analysis data. Further it has been reported by CPCB that the CETP installed Online Continuous Effluent Monitoring System (OCEMS) at final outlet of treated effluent for the parameters-pH, TSS, COD, BOD with connectivity to PPCB & CPCB servers. During the visit, the OCEMS was found operational and variation in OCEMS reading compared with monitored results was also reported which indicates the improper working/validation/calibration of OCEMS system.
14. As informed by CETP operator that Bio sludge generated from SBR basin is collected into bio-sludge sump its further fed into centrifuge for dewatering whereas chemical sludge generated from Sludge Blanket Clarifier is collected into chemical sludge sump and it is fed

into centrifuge for dewatering of the sludge. The filtrate of decanter is enrouted to pH Correction Tank -1 for further treatment.

15. At the time of visit, team observed that The CETP has made Shed for storage of the CETP sludge. As per log book records CETP sludge 3517.235 MT during (FY 23-24) was sent to TSDF M/s Re sustainability Limited (M/s Ramky Enviro Engineers Limited) for final disposal.
16. As per EC issued (MoEF&CC dated 13/05/2013) mentioned in special Terms & condition that the CETP shall not discharge into Budha Nallah. However, treated effluent of CETP is discharged into Budha Nallah through underground pipeline 1 km. The Budha Nallah is ultimately meeting into River Sutlej.

And whereas, the Punjab Pollution Control Board is regularly monitoring the quality of the effluent at the inlet & outlet of the CETP and the latest results are as under:

Date	01.01.24	03.02.24	25.02.24	21.03.24	03.04.24	05.04.24	02.05.24	06.06.24	01.07.24	02.08.24	Standards	Design Standards
Parameter	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	Outlet	MoEF/CC	
pH	8.1	8.3	8.2	8.2	8.0	8.0	8.2	8.2	8	8.26	6.0 - 9.0	5.5-9.0
TSS	12	28	85	39	20	49	34	59	50	43	100	50
TDS	2409	3541	4636	5688	3341	3993	3639	3984	2923	4074	2100	Inlet TDS +/- 10 % variation
COD	120	112	140	152	148	136	148	139	76	142	250	100
BOD	17	16	22	27	22	20	28	27	14	26	30	10
O & G	8.0	5.8	4.8	7.2	6.2	6.6	5.8	5.4	5.6	6.2	10	10
Phenolic Compound	BDL	BDL	1.0	0.8	1.5	BDL	1	1	1	2.2	1	-
Sulphides	BDL	BDL	BDL	BDL	BDL	0.6	BDL	BDL	BDL	1.1	2	-
Amm. Nitrogen	2.5	4.7	5.4	BDL	3.4	2.8	2.8	1.2	BDL	1.6	50	2
SAR	32.5	34	36.16	41	20.9	36.0	25.8	BDL	BDL	BDL	-	-
Total Chromium	BDL	BDL	BDL	0.14	0.15	BDL	BDL	379	180	292	-	-
RSC	7.36	7.92	8.8	7.84	6.36	6.8	6.96	2	0.44	0.3	-	-
Bio-assay	90% survival of fish in 100% effluent in 96 Hr	100% survival of fish in 100% effluent in 96 Hr	100% survival of fish in 100% effluent in 96 Hr	100% survival of fish in 100% effluent in 96 Hr	100% survival of fish in 100% effluent in 96 Hr	100% survival of fish in 100% effluent in 96 Hr	100 % survival of fish in 100% effluent after 96 hours	90% survival of fish in 100% effluent in 96 Hr	90% survival of fish in 100% effluent in 96 Hr	**70% survival of fish in 100% effluent in 96 Hr**	90% survival of fish in 100% effluent in 96 Hrs.	90% survival of fish in 100% effluent in 96 Hrs.

And whereas, the SPV is violating the provisions of the Water (Prevention & Control of Pollution) Act, 1974.

And whereas, the CPCB vide its letter no. 3471 dated 12.08.2024, issued directions under section 18(1) (b) of the Water (Prevention & Control of Pollution) Act, 1974 and Air (Prevention and control of pollution) Act, 1981, to the Punjab Pollution Control Board (PPCB) to take appropriate action including imposing Environmental Compensation and to ensure that CETPs are operated ensuring:

a. Operation/augmentation of the treatment system, appropriately, so as to meet the prescribed discharge standards and to comply with the disposal condition mentioned in the Environmental Clearance by MoEF & CC dated 03.05.2013 and 08.12.2014 in the aforesaid 40 MLD, 50 MLD and 15 MLD CETPs. Further, to stop discharging of treated effluent into Buddha Nallah from the 50 MLD CETP, 40 MLD CETP and 15 MLD CETPs.
b. With valid consent under the Water Act-1974 / Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 from PPCB and comply with all the conditions mentioned thereof.
c. Undertaking regular calibration, maintenance and validation of the OCEMS analysers as per standard operating procedures/ recommendations of the suppliers, so as to ensure generation of continuous & reliable data.

Further, PPCB is also hereby directed:

achieved except with the issuance of directions. It is a fit case to invoke the provisions of section 33-A of the Water (Prevention and Control of Pollution) Act, 1974 for issuance of suitable directions to the SPV operating the CETP of 40 MLD capacity at Tajpur Road, Ludhiana. Hence, the Chairman of the Board in exercise of the powers conferred u/s 33-A of the Water (Prevention and Control of Pollution) Act, 1974 decided to issue the following directions to the SPV of CETP of 40 MLD capacity:

1. The consent to operate granted under the Water (Prevention & Control of Pollution) Act, 1974 be revoked.
2. The SPV shall meet with the prescribed discharge standards and to comply with the disposal conditions mentioned in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change dated 03.05.2013.
3. The SPV shall immediately stop the discharge of effluent from the CETP of 40 MLD capacity into Buddha Nallah or any other surface water body.

And whereas, the proceedings of personal hearing held before the Chairman of the Board on 18.09.2024 has been conveyed to the CETP and consent to operate under the Water (Prevention & Control of Pollution) Act, 1974 has been revoked.

Now, therefore, the Competent Authority of the Punjab Pollution Control Board, in exercise of the powers conferred upon it u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988, issues the following directions:

1. That, the SPV shall meet with the prescribed discharge standards and to comply with the disposal conditions mentioned in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change dated 03.05.2013.
2. That, the SPV shall immediately stop the discharge of effluent from the CETP of 40 MLD capacity into Buddha Nallah or any other surface water body.

In case of failure to comply with the above said direction, you are liable for action u/s 41 of the Water (Prevention and Control of Pollution) Act 1974 as amended in 1988.

For and on behalf of
Punjab Pollution Control Board

Endst. No. 5648 Dated 26/09/24

A copy of the above is forwarded to the Environmental Engineer, Punjab Pollution Control Board, Regional Office-1, Ludhiana for information and necessary action. It is also directed to submit report regarding effective compliance of above said directions, within 3 days positively.

For and on behalf of
Punjab Pollution Control Board

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਰੋਕਥਾਮ ਬੋਰਡ
PUNJAB POLLUTION CONTROL BOARD
LiFE Lifestyle for Environment
Zonal Office-II, E-648-B, Back Side CICU Office, Phase-5, Focal Point, Ludhiana
E-mail: seezo2.dhppcb@yahoo.com Ph No. 0161-2670141

No. PPCB/SEE/ZO-2/LDH/2024/5809-03 Regd. Dated 25.01.24

To

1) The Chairman,
Bahadur Ke Textile & Knitwear Association (SPV),
C/o M/s Adinath Dyeing & Finishing Mills, Bahadurke Road,
Dyeing Complex, Ludhiana.

2) The Director,
Bahadur Ke Textile & Knitwear Association (SPV),
C/o M/s Shri Balaji Finishing Mills, Bahadurke Road,
Dyeing Complex, Ludhiana.

Sub: **Directions u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988.**

Whereas, Bahadur Ke Textile Knitwear Association (SPV for CETP) has installed and is operating the Common Effluent Treatment Plant (CETP) of capacity 15 MLD for treatment of waste water from the cluster of textiles dyeing industries located at Bahadur Ke Road in Ludhiana.

And whereas, earlier the SPV was granted consents to operate under Water (Prevention and Control of Pollution) Act, 1974 vide no. CTOW/Renewal/LDH3/2022/18251904 dated 05.07.2022 and Air (Prevention & Control of Pollution) Act, 1981 vide no. CTOA/Varied/LDH3/2023/ 20380901 dated 25.04.2023, to operate the CETP of capacity 15 MLD for the treatment of effluent generated from dyeing industries located at Bahadurke Road, Ludhiana, both the consents had expired on 04.01.2023 and 31.03.2024 respectively.

And whereas, since the inception and commissioning, the SPV of 15 MLD capacity is being pursued by the Board from time to time for the compliance of the provisions of environmental laws especially the Water (Prevention and Control of Pollution) Act, 1974 by way of issuing notices, requests, reminders and affording of opportunities of hearing before the Competent Authority. The officers of the Board are also carrying out the monthly monitoring of the Common Effluent Treatment Plant since the commissioning of the CETP.

And whereas, the SPV, BKTKA was given personal hearing before the Chairman of the Board on 16.06.2023 u/s 33-A of Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988 for non-achievement of effluent discharge standards at final outlet of CETP-15 MLD. After hearing the representations of the SPV and the officers of the Board and considering the relevant facts of the case, the Chairman of the Board has decided as under:

1. SPV shall submit a time bound proposal for up-gradation and augmentation of the CETP along with PERT Chart so as to achieve the prescribed standards as well as the standards as mentioned in the DPR appraised at the time of approval of financial aid received from, the Government for this CETP, within 30 days.
2. SPV shall submit a time bound proposal for 2nd Phase of up-gradation of CETP to ZLD along with PERT Chart as per the condition of Environmental Clearance granted by MoEF&CC, within 30 days.
3. SPV shall take all necessary measures to reduce the concentration of various pollutants at source including pretreatment in the member units wherever required so as to meet with inlet standards of DR at CETP and issue necessary directions to this effect to the member units.
4. Till the up-gradation of CETP, SPV shall operate the existing CETP with best of its ability, adequately and efficiently so as to achieve the prescribed standards.

5. SPV shall also work on the removal of colour at the final outlet of the CETP to achieve the desired standards as well as to the visual satisfaction.
6. SPV shall submit the performance bank guarantee of remaining amount after deduction of the EC i.e. (2,40,00000 - 77,62,500 = 1,62,37,500) of Rs. 1,62,37,500/-, within 15 days.
7. SPV shall get installed SCADA enabled flow meters with all the member units at intake supply (submersible pumps / MC supply / other sources) having connectivity with the Online Monitoring System of CETP and access to Punjab Pollution Control Board, within one month to ensure that no bye-pass of effluents is being operated by them. Till the installation of online meters, the industry shall must have EMF or mechanical meter at intake supply for which record is to be maintained on day to day basis.
8. SPV shall provide flow meter, CCTV cameras and Online Monitoring Mechanism at its final outlet leading to Buddha Nallah, within one month.
9. Environmental Compensation for the period of 20.04.2022 to 11.05.2023 (date of last sampling) shall be imposed on the SP for not operating the CET properly and efficiently resulting in non-achievement of results. Regional Office-3, Ludhiana to calculate the amount of Environmental Compensation and obtain necessary approvals.
10. Legal action against the SPV (CETP 15 MLD, Bahadur Ke Road, Ludhiana) and its Directors (M/s Bahadur Ke Textile & Knitwear Association (SPV) as well as CETP operator be initiated in the Competent Court of Jurisdiction.

And whereas, the SPV has not complied with the decisions of the hearing mentioned above from serial no.1 to serial no. 06 as the SPV has neither submitted any proposal to adopt ZLD nor submitted bank guarantee of remaining amount after deduction of the EC.

And whereas, the CETP of capacity 15 MLD installed at Bahadurke Road, Ludhiana for the treatment of effluent generated from the dyeing industries of Bahadurke cluster is fully operational since July 2020 and CETP is being regularly monitored by the Board on monthly basis. The CETP has failed to achieve the stringent discharge standards prescribed by the Board for the CETP since its commissioning.

And whereas, the SPV had applied for renewal of consent to operate under Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 and accordingly, CETP 15 MLD was visited by officer of the Board on 11.04.2024 and it was observed as under:

1. CETP was in operation for the treatment of effluent generated from the member dyeing industries. DAF was also in line and operational.
2. CETP had recently added 03 new sludge de-watering machines alongwith 02 existing sludge centrifuge pumps and these newly installed 03 machines were in operation and existing 02 were in standby mode.
3. The recently added 01 wood fired boiler of capacity 01TPH with cyclone separator as an APCD alongwith steam paddler drier was also in operation.
4. During visit effluent was collected and sent to the Board's lab for analysis, as per the analysis report CETP is achieving the discharge standards prescribed by the MoEF&CC except one parameter i.e. TDS but it has failed to achieve stringent discharge standards prescribed by the Board.
5. CETP is complying with the provisions of the Air (Prevention & Control of Pollution) Act, 1981.

And whereas, the SPV has failed to comply with the decisions taken during the personal hearing dated 16.06.2023 and to achieve stringent effluent discharge standards. Thus, the SPV was found violating the provisions of the Water (Prevention & Control of Pollution) Act, 1974.

And whereas, the SPV was granted Environmental Clearance vide MoEF&CC letter dated 08.12.2014 for the establishment of CETP based on Zero Liquid Discharge (ZLD). Thereafter a follow up meeting of Appraisal Committee on CETP was held in the MoEF&CC on 03.03.2016

and during the meeting it was decided that the SPV shall install CETP based on conventional treatment method in 1st phase and may adopt ZLD in 2nd phase. Minutes of the said meeting were issued vide MoEF&CC letter dated 18.03.2016, but the SPV has not submitted any proposal till date to adopt 2nd phase i.e. ZLD.

And whereas, the SPV has filed appeals before the Appellate Authority-cum-Secretary to Government of Punjab, Department of Science Technology and Environment against following decisions of the Board:

1. Imposition of EC amounting to Rs. 01 crore to the SPV vide minutes of meeting dated 08.10.2021.
2. Imposition of EC amounting to Rs. 77.625 Lacs to the SPV vide Board's no. 335 dated 4.10.2022
3. Against the decision of the Board to obtain Performance Bank Guarantee of Rs. 2.4 Crores from the SPV.

And whereas, however, above appeals filed by the SPV were decided and dismissed by the Appellate Authority-cum-Secretary to Government of Punjab, Department of Science, Technology and Environment vide orders dated 20.05.2024.

Environmental Compensation (EC) amounting to Rs.1 crore has already been deposited by the SPV and EC amounting to Rs.77.625 lacs has been recovered from the amount of performance bank guarantee of Rs. 2.4 crore earlier submitted by the SPV. However, the SPV has not submitted performance bank guarantee of remaining amount after deduction of the EC amounting to Rs. 77.625 Lac by the Board i.e. (2,40,00000 - 77,62,500 = 1,62,37,500) till date. The appeal filed by the SPV against this BG has already been dismissed by the Appellate Authority.

And whereas, the SPV is not complying with the decisions of the Competent Authority.

And whereas, show cause notice for refusal of consent to operate under the Water (Prevention & Control of Pollution) Act, 1974 was issued to the SPV with an opportunity of personal hearing before the Chairman of the Board on 09.07.2024 postponed to 12.07.2024, postponed to 16.07.2024 and postponed to 23.07.2024. No one on behalf of SPV attended the hearing. Considering the request of the SPV, the hearing was further postponed to 09.08.2024. However, no one on behalf of SPV again attended the hearing on 09.08.2024.

And whereas, keeping in view the act and conduct of the SPV, it was observed that the SPV is not serious about resolving the issues / violations reported on part of the CETP and SPV is not attending the hearing being afforded by the Board to avoid the implementation of the provisions of Environmental Laws. After considering all the aspects of the case, the Chairman of the Board decided to proceed ex-parte and has taken the following decisions:

1. The consent to operate applied by the SPV under the Water (Prevention & Control of Pollution) Act, 1974 be refused as ex-parte decision.
2. Notice to issue directions u/s 33-A of the Water Act, 1974 to take measures to control the pollution generated by the CETP, which may include taking legal action against the responsible persons of the SPV, to stop the transaction of the bank account of SPV with immediate effect, to impose the appropriate Environmental Compensation based on polluter pays principle and to upgrade the existing CETP to the ZLD, be issued to the SPV alongwith an opportunity of personal hearing before the Chairman of the Board.

And whereas, the proceedings were conveyed to the SPV vide Board's letter no. 5336-37 dated 29.08.2024.

And whereas, in compliance to the decisions of hearing the consent to operate under the Water (Prevention & Control of Pollution) Act, 1974 was refused vide no. CTOW/Renewal/LDH3/2024/ 25302219 dated 30.08.2024.

And whereas, in compliance of directions of the Central Monitoring Committee (CMC), CPCB has carried out inspection and monitoring of the Buddha Nallah and River Sutlej on 02.04.2024. The CPCB has also carried out inspection of 04 CETPS located at Ludhiana on

22.04.2024 and issued directions u/s 18(1)(b) of the Water (Prevention and Control of Pollution) Act, 1974 regarding non-compliance of four CETPs of Ludhiana. The CETP of capacity 15 MLD was visited by the team of CPCB and following observations were made:

1. During the visit on 22.04.2024, the CETP was found operational with the flow rate of 11.26 MLD. The CETP receives effluent through dedicated underground pipeline and the treatment is based on Sequential Batch Reactor (SBR) technology. It was informed that the CETP is discharging the treated effluent into Buddha Nallah (which meets River Sutlej) through underground pipeline from the CETP. However, as per EC issued by MoEF&CC on 08.12.2014, the CETP is required to establish a Zero Liquid Discharge system.
2. The consent under the Air Act, 1981 is valid upto 31.03.2025 for the operation of 15 MLD CETP. However, the consent under the Water Act, 1974 was valid till 04.01.2023 and the Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 was valid till 04.10.2022 for which the CETP has applied for renewal to PPCB.
3. During visit, it was informed to the team that 36 Dyeing/Printing/washing units had obtained membership from CETP and connected to the CETP.
4. Grab samples were collected from the CETP during monitoring. The analysis results of sample collected from CETP outlet reveals thats B OD: 243 mg/l (Standard: 30 mg/l), COD: 587 mg/l (Standard: 250 mg/l), Chloride: 1904 mg/l (Standard: 1000 mg/l) and Sulphide: 16 mg/l (Standard: 2 mg/l) exceeds the notified effluent discharge standards for CETP. Remaining monitored parameters were found within the prescribed standards.
5. Further, the grab samples were collected from the Sequential Batch Reactor (SBR) tank for MLSS & MLVSS. The sample analysis results reveals that the concentration of MLSS: 2639 mg/l (Designed value: 4840 mg/l) and concentration MLVSS: 1179 mg/l (Designed value: 3872 mg/l) are less than the designed values, which indicates the poor operation of the SBR.
6. The CETP has installed Online Continuous Effluent Monitoring System (OCEMS) at the final outlet of treated effluent for the parameters pH, TSS, COD, BOD with connectivity to PPCB & CPCB servers. During the visit, the OCEMS was found operational and variation in OCEMS reading compared with the monitored results was also reported which indicates the improper working / validation / calibration of OCEMS system.
7. During the visit, it was observed that the CETP has provided sludge storage facility and obtained membership from M/s Re-sustainability Limited (M/s Ramky Enviro Engineers Limited) for disposal of sludge. The CETP had disposed 602.685 MT Sludge during the period of 02.04.2023 to 31.03.2024, through TSDF.

And whereas, the SPV is violating the provisions of the Water (Prevention & Control of Pollution) Act, 1974.

And whereas, Environmental Engineer, Zonal Office-2, Ludhiana brought out that in light of deficiencies as observed by CPCB in operation of the CETPs of Ludhiana installed for dyeing units on its visit on 22.04.2024, the Central Pollution Control Board has issued directions u/s 18/1(b) of the Water (Prevention & Control of Pollution) Act, 1974 vide letter dated 12.08.2024 to take appropriate action including imposing Environmental Compensation and to ensure that the CETP is operated ensuring:

a) Operation/ augmentation of the treatment system, appropriately, so as to meet the prescribed discharge standards and to comply with the disposal condition mentioned in the Environmental Clearance by MoEF&CC dated 03.05.2013 and 08.12.2014 in the aforesaid 40 MLD, 50 MLD & 15 MLD CETPs. Further, to stop discharging of treated effluent into Buddha Nallah from 50 MLD, 40 MLD & 15 MLD CETPs.

b) With valid consent under the Water Act, 1974/ Authorization under the Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016 form PPCB and comply with all the conditions mentioned thereof.

c) Undertaking regular calibration, maintenance and validation of the OCEMS analysers as per standard operating procedures/recommendations of the suppliers, so as to ensure generation of continuous & reliable data.

And whereas, Punjab Pollution Control Board was further directed by Central Pollution Control Board as under:

a. To prescribe disposal condition to respective CETPs in accordance with the Environmental Clearance by MoEF&CC dated 03.05.2013 & 08.12.2014.

b. To prescribe inlet standards for CETP in accordance to the CETP notification dated 01.01.2016.

c. To regularly undertake verification of member industries of the CETP for ensuring proper operation of PETP/ETP by individual member industry.

And whereas, notice to issue directions u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988 was issued to the SPV with an opportunity of personal hearing before Chairman of the Board on 13.09.2024 postponed to 18.09.2024.

And whereas, Sh. Lalit Jain, Director of the SPV (CETP of 15 MLD) alongwith Sh. I.K. Kapila, Advocate, Hon'ble Supreme Court of India attended the hearing and submitted a written reply which was taken on record. The representatives stated that although the EC was obtained by the SPV for ZLD based treatment but later on the project was conceived on the SBR based secondary level treatment. The representatives further contended that other two CETPs of 40 MLD & 50 MLD capacity were duly sanctioned without any condition / requirement for ZLD level treatment. Regarding the submission of Bank Guarantee as per decision of personal hearing afforded to the SPV by Chairman of the Board on 16.06.2023, the representatives informed that the SPV has challenged the said decision by way of filing appeal before the Appellate Authority and the decision is pending. The representatives disagreed with the technical observations as reported by the CPCB and did not find the same acceptable to the SPV and insisted not to penalize the SPV on the basis of the said report. The representatives further informed that the SPV has applied for obtaining the consent to operate under the Water (Prevention & Control of Pollution) Act, 1974 with the Board.

And whereas, during hearing, it was observed by the Competent Authority that the SPV has been constantly pursued by the Board to submit proposal for upgradation of the CETP to ZLD technology in consonance with the EC conditions and thus not to discharge its effluent into the Buddha Nallah. However, the SPV has not taken any step in this direction. The Ludhiana city has been declared as critically polluted area due to various reasons and one of the reasons is the activities of the industrial units in violation of the environmental norms. Though the Board has imposed EC and performance Bank Guarantee but the SPV is still violating the provisions of the Water (Prevention and Control of Pollution) Act, 1974.

And whereas, the representatives of the SPV could not give any satisfactory reply to the observations raised during the hearing.

And whereas, after detailed deliberations and hearing the representatives of SPV, officers of the Board and taking into consideration various factors including the seriousness of the issue, the Chairman of the Board observed that the objective to restrain the discharge of effluent into Budha Nallah cannot be achieved except with the issuance of directions. It is a fit case to invoke the provisions of section 33-A of the Water (Prevention and Control of Pollution) Act, 1974 for issuance of suitable directions to the SPV operating the CETP of 15 MLD capacity at Bahadurke Road, Ludhiana. Hence, the Chairman of the Board in exercise of the powers conferred u/s 33-A of the Water (Prevention and Control of Pollution) Act, 1974 decided to issue the following directions to the SPV of CETP of 15 MLD capacity:

1. The SPV shall ensure that the operation / augmentation of treatment system of CETP is appropriately made, so as to meet with the prescribed discharge standards and to comply with the disposal conditions mentioned in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change dated 08.12.2014.
2. The SPV shall immediately stop the discharge of effluent from the CETP of 15 MLD capacity into Buddha Nallah or any other surface water body.

And whereas, the proceedings of the hearing were conveyed to the industry vide no. 5798-99 dated 25.09.2024.

Now, therefore, the Competent Authority of the Punjab Pollution Control Board, in exercise of the powers conferred upon it u/s 33-A of the Water (Prevention & Control of Pollution) Act, 1974 as amended in 1988, issues the following directions:

1. That, the SPV shall ensure that the operation / augmentation of treatment system of CETP is appropriately made, so as to meet with the prescribed discharge standards and to comply with the disposal conditions mentioned in the Environmental Clearance granted by the Ministry of Environment, Forest and Climate Change dated 08.12.2014.
2. That, the SPV shall immediately stop the discharge of effluent from the CETP of 15 MLD capacity into Buddha Nallah or any other surface water body.

In case of failure to comply with the above said directions, you are liable for action u/s 41 of the Water (Prevention and Control of Pollution) Act 1974 as amended in 1988.

For and on behalf of
Punjab Pollution Control Board

Endst. No. 5804 Dated 25/09/24.

A copy of the above is forwarded to the Environmental Engineer, Punjab Pollution Control Board, Regional Office-3, Ludhiana for information and necessary action. He is also **directed to submit report regarding effective compliance of above said directions, within 3 days positively.**

For and on behalf of
Punjab Pollution Control Board